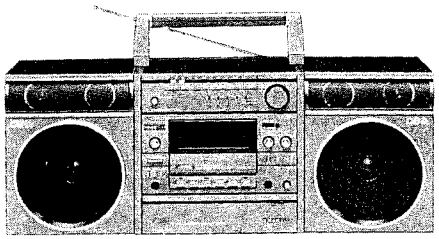
SERVICE MANUAL

SANYO

PORTABLE MINI COMPONENT SYSTEM

C9

(SILVER)



(GRAY)

SPECIFICATIONS

C9T TUNER SECTION

FM section

Frequency range	87.5 – 108 MHz
Usable sensitivity	2.0μV/300Ω (mono)
Signal to noise ratio (1 mV ANT.)	80 dB (mono)
Harmonic distortion (1 kHz)	0.5% (mono)
Aerial input	300 ohms balanced

MW/SW1/SW2 section

Frequency range	MW: 530 – 1605 kHz
	SW1: 2.3 – 7.3 MHz
	SW2: 7.3 – 22 MHz
Sensitivity	300μV/m (MW)
	250μV/m (SW1)
	10μV (SW2)
Signal to noise ratio (10 mV/m)	50 dB (MW)
Aerial	Ferrite bar aerial and external aerial terminal

General

Dimensions (Approx.)	215(W) x 205(D) x 58(H) mm (8-1/2" x 8-1/16" x 2-5/16")
Weight (Approx)	1.15 kg (2 lbs. 9 ozs.)

C9D CASSETTE DECK/AMPLIFIER SECTION

Cassette deck section

Tape	Metal, normal tape
Recording system	AC bias, 4-track stereo
Erasing system	AC erasing, 2-track
Tape speed	4.75 cm/sec. (1-7/8 i.p.s.)
Rewind and fast forward time	Approx. 110 sec. (C–60)
Wow and flutter	0.05% (WRMS)
Frequency response	30 – 17,000 Hz (metal)
	30 – 14,000 Hz (normal)
Signal to noise ratio (metal tape)	64 dB (Dolby NR on)
	56 dB (Dolby NR off)

Amplifier section

Output power	30 W x 2 maximum music power (at 6 ohms load, AC)
Inputs	MIC: 1.5 m/10 kohms
	PHONO: 3.5mV/47 kohms
	LINE IN: 350mV/20 kohms
Outputs	LINE OUT: 0.3V
	SPEAKER: 6 – 8 ohms
	PHONES: 8 ohms to 10 kohms
Tone control response	
BASS	±8 dB (at 100 Hz)
TREBLE	±8 dB (at 10 kHz)
Loudness control response 100 Hz/10 kHz	+8 dB/+4 dB
Signal to noise ratio.	76 dB (phono)

General

Dimensions (Approx.)	215 (W) x 206 (D) x 120.5 (H) mm (8-1/2" x 8-1/8" x 4-3/4")
Weight (Approx.)	2.9 kg (6 lbs. 6 ozs.)

C9S SPEAKER SYSTEM

Type	2 way speaker system, Tweeter 4 cm, Woofer 16 cm
Impedance	6 ohms
Input power	30 W (maximum)
Dimensions (Approx.)	180 (W) x 180 (D) x 231 (H) mm (7-1/16" x 7-1/16" x 9-1/8")
Weight (Approx.)	2.1 kg. (4 lbs. 10 ozs.) x 2

C9P POWER SUPPLY UNIT

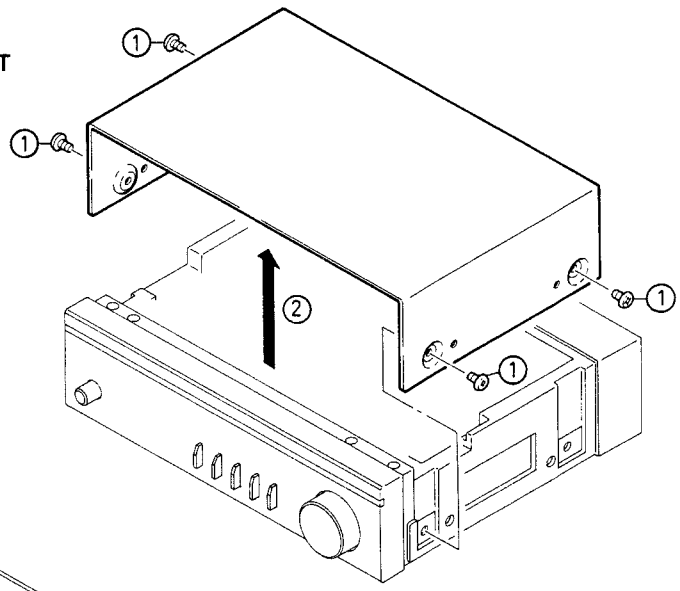
Power requirements.	AC: 120/220/240V, 50/60 Hz
	DC: 12 – 15V car battery adaptor
	DC: 13.5 V "D" (UM–1) x 9
Power consumption.	40 W
Dimensions (Approx.)	215 (W) x 225 (D) x 62.5 (H) mm (8-1/2" x 8-7/8" x 2-7/16")
Weight (Approx.)	3.3 kg. (7 lbs. 5 oxs.) including batteries
Total dimensions of the system C9	597 (W) x 232 (D) x 306.5 (H) mm (23-1/2" x 9-1/8" x 12-1/16")
Total weight of the system C9.	12.4 kg. (27 lbs. 5 ozs.) including batteries

* Specifications subject to change without notice.

DISASSEMBLY (TUNER UNIT)

Perform disassembly of tuner unit after removing the power source (supply cord, battery, lead cord) without fail. A major component of tuner unit can be removed simply if removed in order of numbering given in each of following figures:

T–1
REMOVING CABINET



T–2
REMOVING BOTTOM-LID

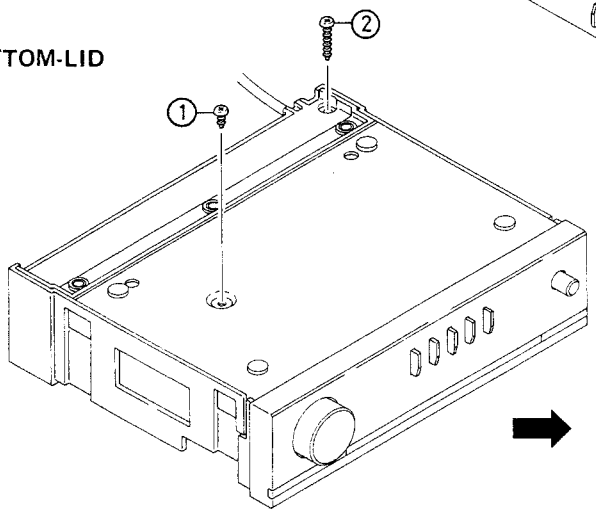


Fig. a

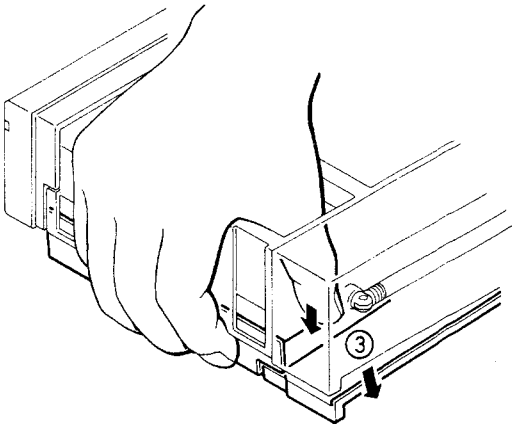
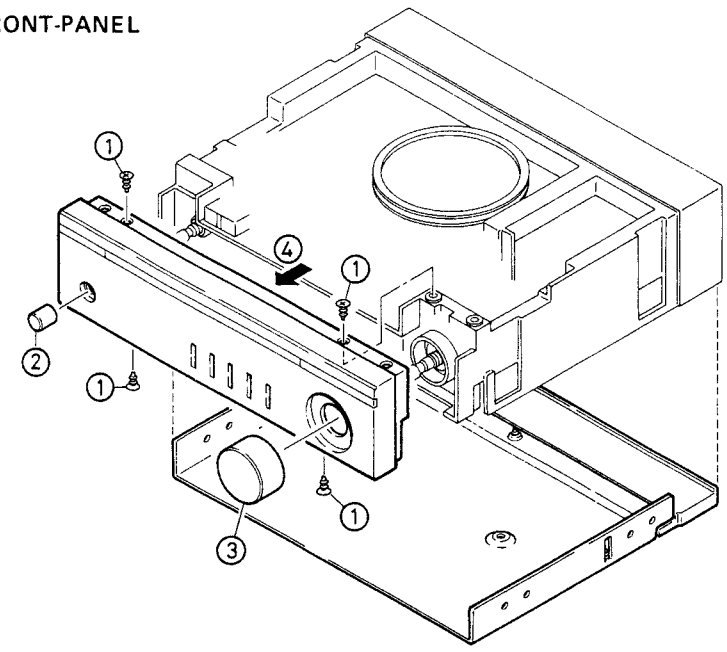


Fig. b

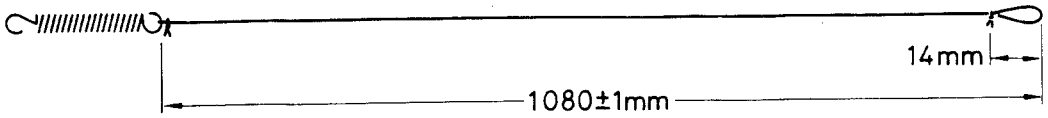
T–3
REMOVING FRONT-PANEL

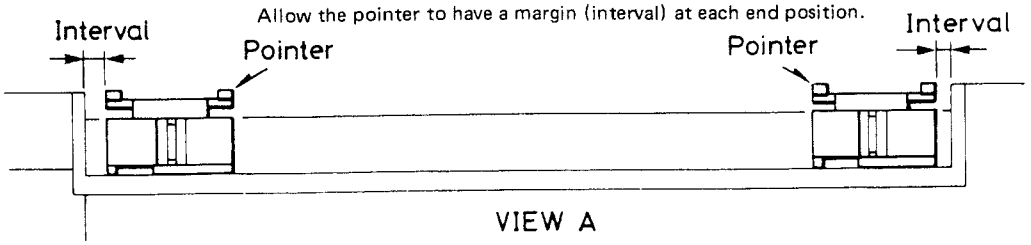


STRINGING OF DIAL ROPE (TUNER UNIT)

(1) Preparation

Prepare 0.5mmφ x 1200mm rope. Knot an one end of this rope so that the inner diameter of thus formed loop becomes 14mm. Bind another end of rope to the spring coil so that the overall length becomes 1080 ± 1mm.



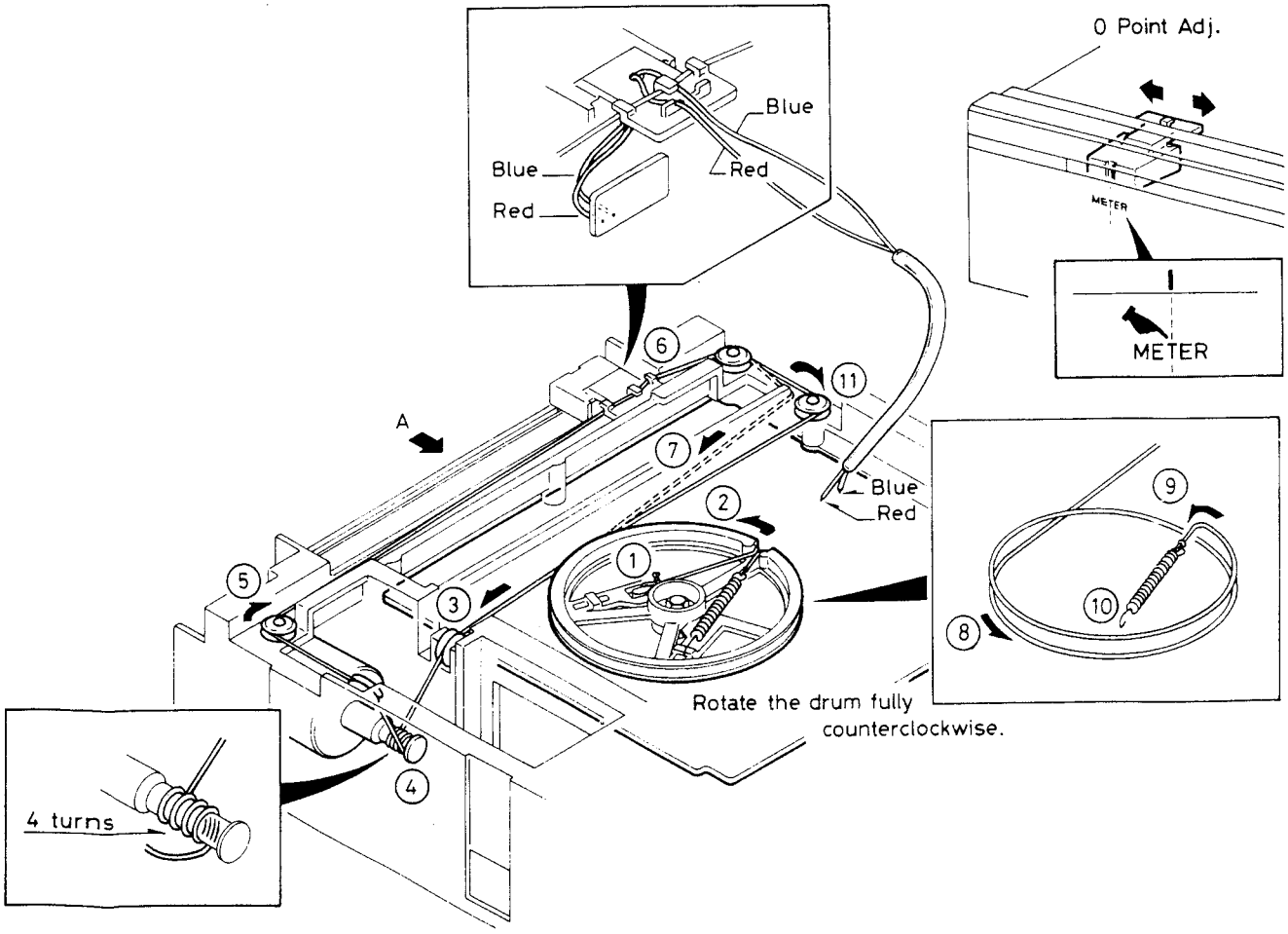


(2) As shown in illustration, hook the I.0. 14mm loop to the drum. String the free end of rope in the direction of ①, and advance stringing from ② to ③ and then to ④. At ④, coil the rope round ④ for four turns, and string through ⑤, ⑥, ⑦ and ⑧. Then coil around the drum for two turns in order of ⑨ and ⑩. Next, fasten the spring coil to the drum.

Finally, stretch thus strung rope to pass through ⑪.

(3) Adjustment of pointer postion

Agree the center of pointer LED with the vertical posistion of letter T of "METER" marked on the front panel.



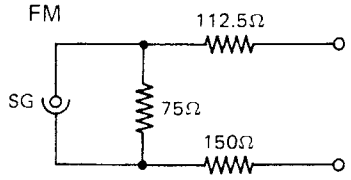
TUNER ADJUSTMENT (TUNER UNIT)

Notes:

1. Perform tuner adjustment under the condition of interconnecting units because the tuner unit will not singly operate basically in this Model.
2. For adjustment, change over setting of switches and controls to the following position:
   MODE ⟶ Stereo TAPE/TUNER/PHONO ⟶ TUNER LOUDNESS ⟶ Off
   BAL. ⟶ Central BASS ⟶ Central TRE. ⟶ Central
3. For coverage adjustment, adjust basically the graduation of dial scale.
4. Use screwdriver with plastic grip for all adjustment.

GENERAL ADJUSTMENT CONDITIONS

Standard Output Level : 500 mW
Standard Modulation : FM 1KHz 75 KHz Dev. MW. SW1. SW2. 400Hz 30% Mod.
Load Impeadance : 6 ohm
Power Source : DC 13.5V
Dummy Antenna



MW. SW1. I.R.E. Loop
SW2. I.R.E DUMMY

MW ADJUSTMENT

Step	Adjustment	Connections		Postions of Tuning Dial	Parts of Adjustment	Standards of Adjustment	Adjustment for
		Input	Output				
1	IF	Connect AM SG to Loop ANT. terminals	Connect V.T.V.M. to Speaker terminals	Higher than 600 KHz	T151, 251	455 KHz Center frequency of Ceramic Filter	Maximum reading on V.T.V.M.
2	Tuning Coverage			Low End	L164	510 KHz	
				High End	VCT–4	1650 KHz	
3	Tracking			600 KHz	L161	Max. Sensitivity	
				1400 KHz	VCT–3		

SW 1 ADJUSTMENT

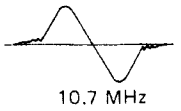
Step	Adjustment	Connections		Positions of Tuning Dial	Parts of Adjustment	Standards of Adjustment	Adjustment for
		Input	Output				
1	Tuning Coverage	Connect AM SG to Loop ANT. terminals	Connect V.T.V.M. to Speaker terminals	Low End	L174	2.1 MHz	Maximum reading on V.T.V.M.
				High End	CT172	7.6 MHz	
2	Tracking			2.5 MHz	L171	Max. Sensitivity	
				6.5 MHz	CT171		

SW 2 ADJUSTMENT

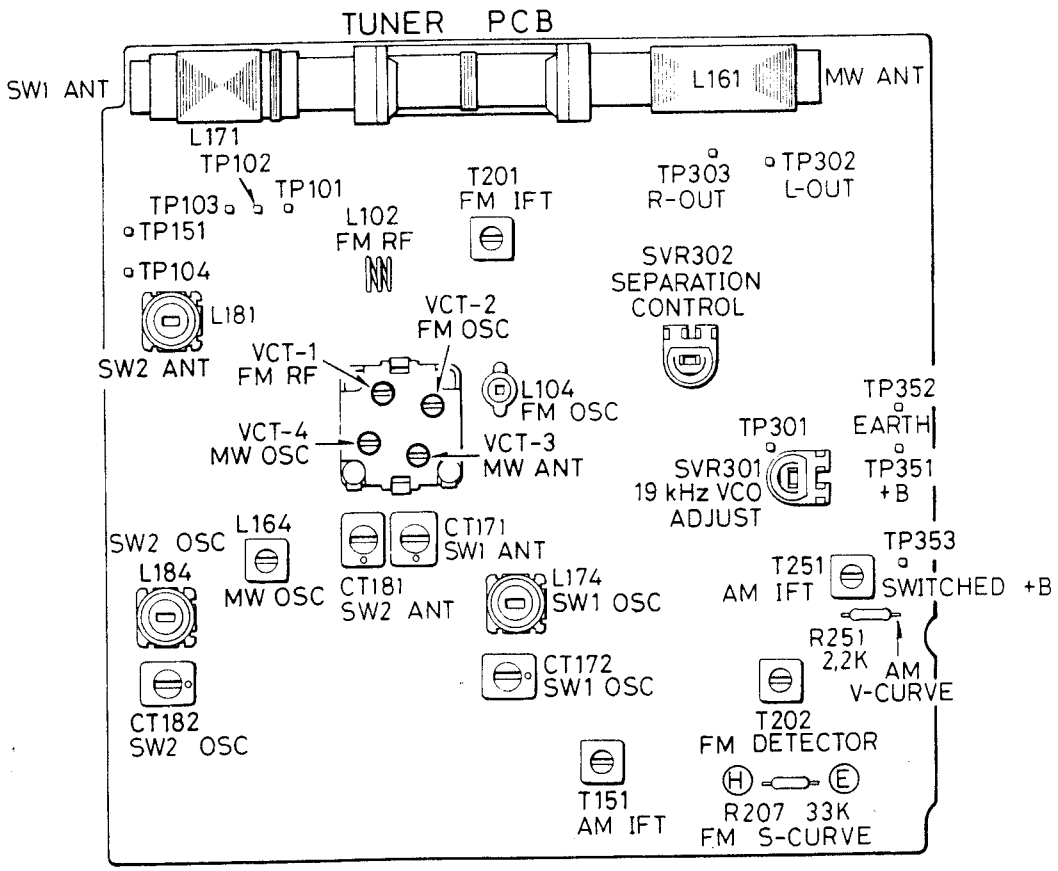
Step	Adjustment	Connections		Position of Tuning Dial	Parts of Adjustment	Standards of Adjustment	Adjustment for
		Input	Output				
1	Tuning Coverage	Connect AM SG to TP151 (H) and TP104 (E)	Connect V.T.V.M. to Speaker terminals	Low End	L184	7 MHz	Maximum reading on V.T.V.M.
				High End	CT182	22.7 MHz	
2	Tracking			8 MHz	L181	Max. Sensitivity	
				21 MHz	CT181		

TUNER ADJUSTMENT (TUNER UNIT)

FM ADJUSTMENT

Step	Adjustment	Connections		Position of Tuning Dial	Parts of Adjustment	Standards of Adjustment	Adjustment for
		Input	Output				
1	S–Curve	Connect Output terminals of FM IF SWEEP to TP101,102 (2) and TP104 (E)	Connect Input terminals of FM IF SWEEP to R207	98 MHz	T201,202	10.7 MHz Center frequency of Ceramic Filter	Wave form as shown below  10.7 MHz
2	Tuning Coverage	Connect FM SG to TP101,102 (H) and TP104 (E)	Connect V.T.V.M. to Speaker terminals	Low End	L104	87.4 MHz	Maximum reading on V.T.V.M.
				High End	VCT–2	108.3 MHz	
3	Tracking			90 MHz	L102	Max. Sensitivity	
				106 MHz	VCT–1		
4	V.C.O	Connect FM SG to ANT. terminals Input : 72 dBμ No modulation	Connect Frequency Counter to TP301 (H) and TP352 (E)	98 MHz	SVR 301	19±0.1 KHz	Adjust SVR301 to obtain 19.00 KHz display on Frequency Counter
5	Separation	Connect Stereo modulated FM SG to ANT. terminals Input : 72 dBμ	Connect V.T.V.M. to Speaker terminals of Right (or Left) Channel	98 MHz	SVR302	Best Separation	Adjust SVR302 to obtain Best Separation

PARTS LOCATION

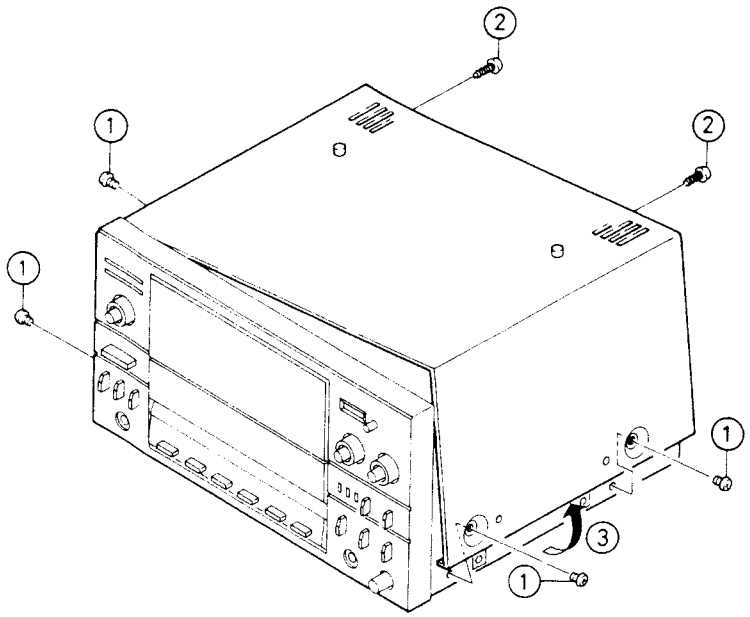


MC-Service

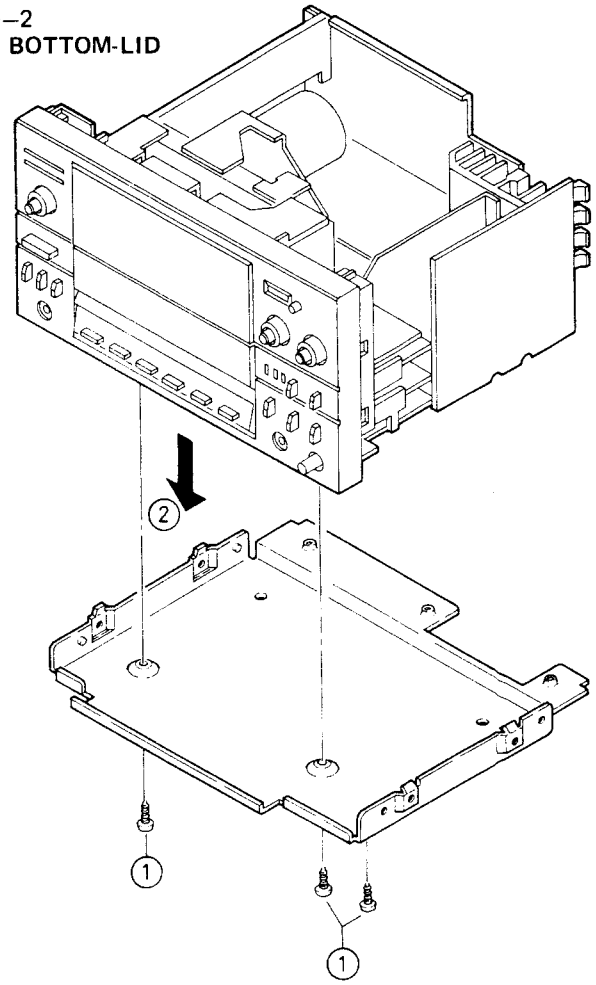
DISASSEMBLY (DECK/AMP UNIT)

Remove parts in order of disassembly as numbered.

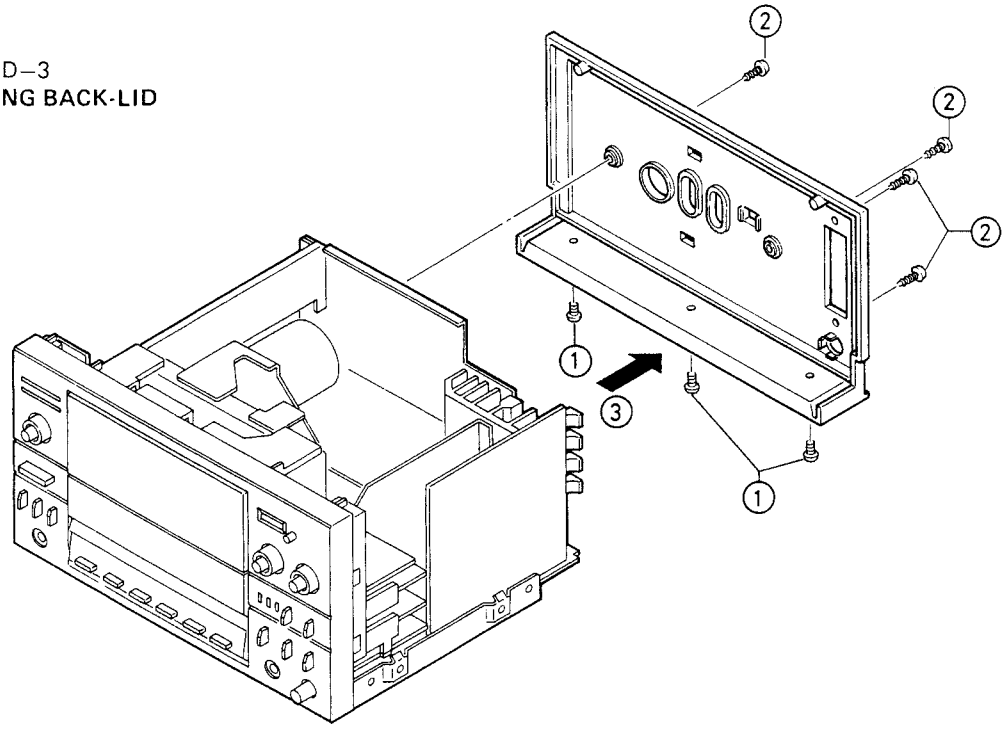
D–1
REMOVING CABINET



D–2
REMOVING BOTTOM-LID



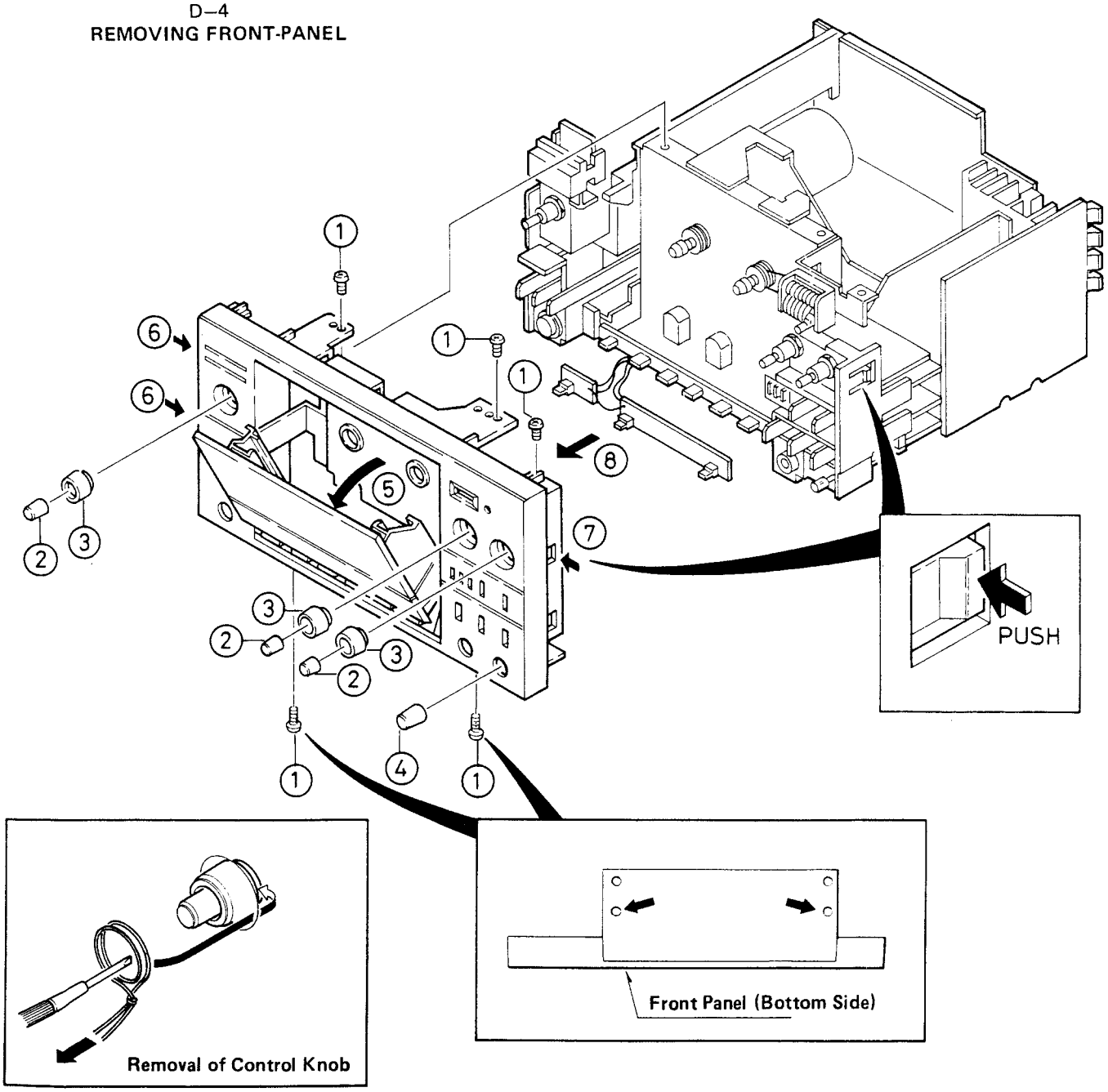
D–3
REMOVING BACK-LID



DISASSEMBLY (DECK/AMP UNIT)

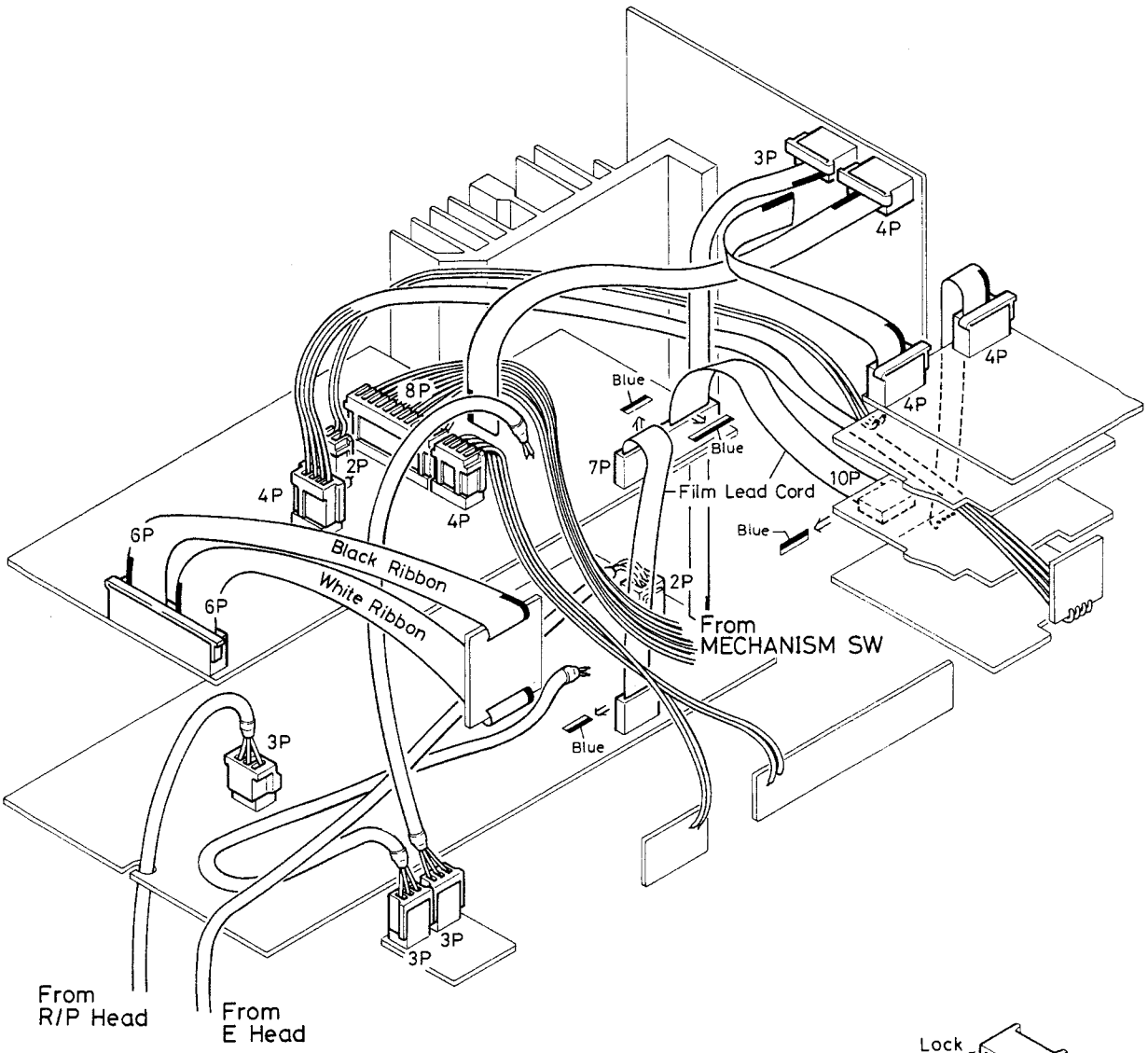
Notes: Remove parts in order of disassembly as numbered.
When removing or fitting the front panel, be careful not to cut lead wires. (See pages 7 & 8.)

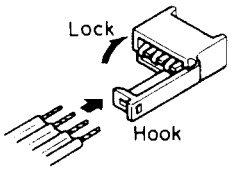
D–4
REMOVING FRONT-PANEL



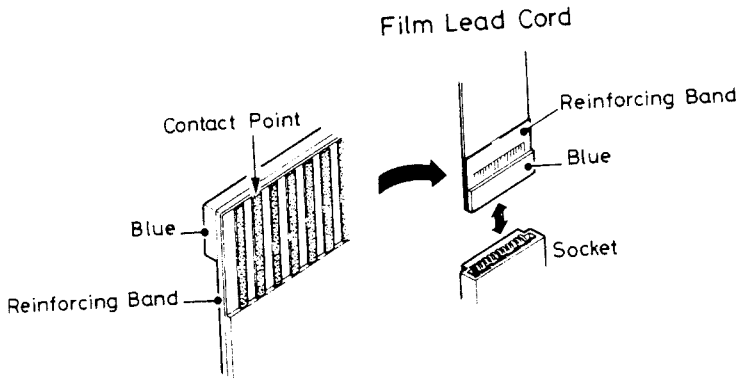
WIRE CONNECTION CHART (DECK/AMP UNIT)

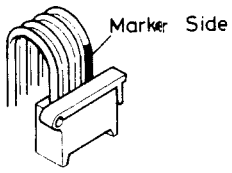
Note: Disconnect lead wires with due attention given to method of removing each socket/plug.





Insert & Lock

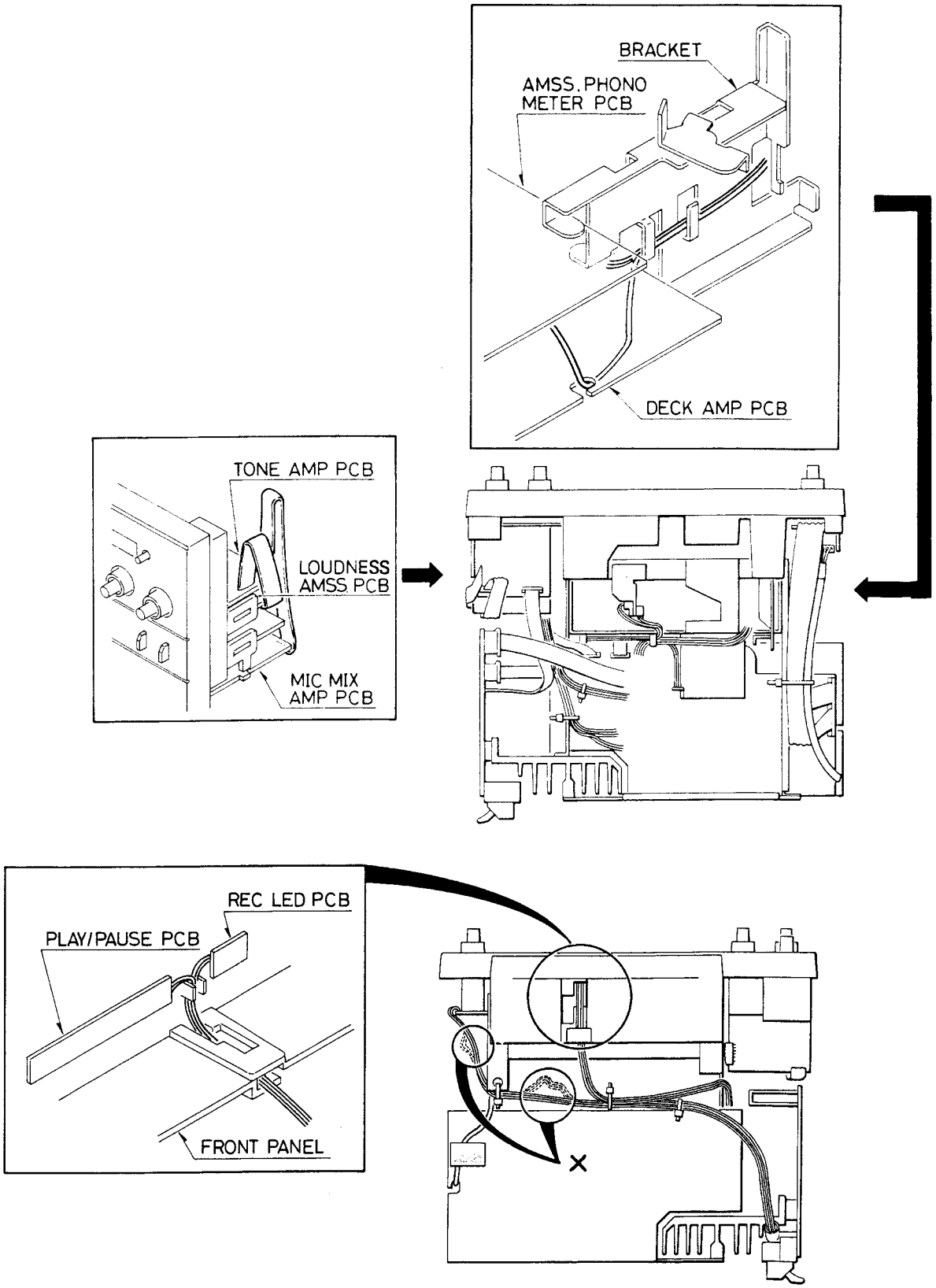




Marker Position

LEAD WIRES ARRANGEMENT (DECK/AMP UNIT)

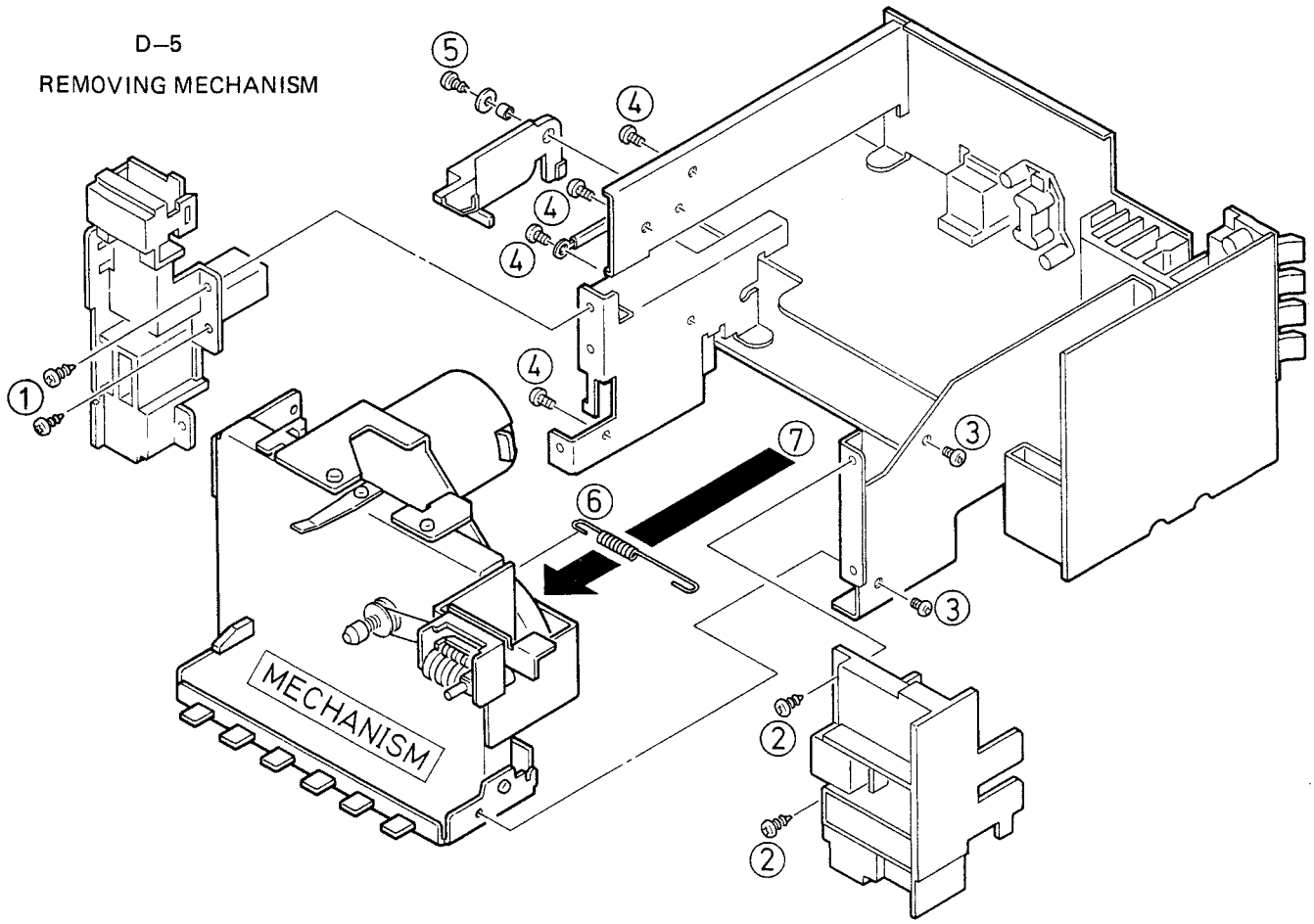
Note: Unless lead wires are shaped properly as illustrated, they may break in reassembly or a malfunction may take place even if reassembled.



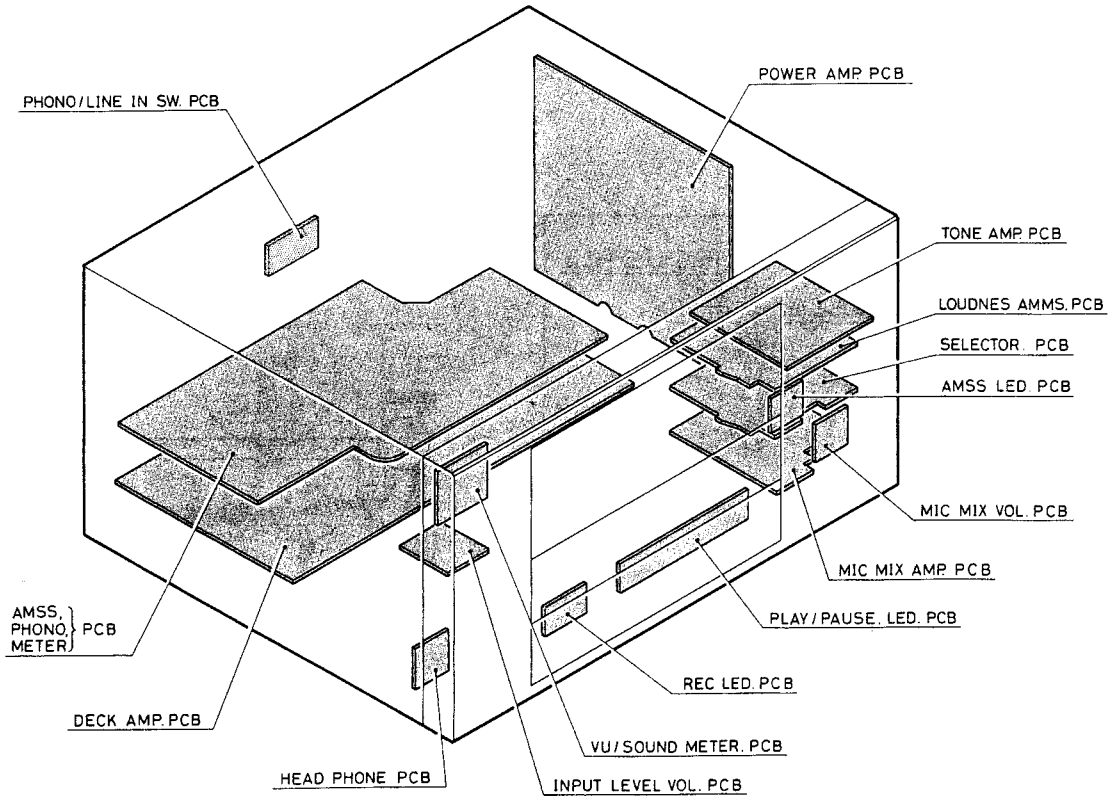
DISASSEMBLY (DECK/AMP UNIT)

Note: Remove parts in order of disassembly as numbered.

D–5
REMOVING MECHANISM



CIRCUT BOARD ARRANGEMENT FIGURE (DECK/AMP UNIT)

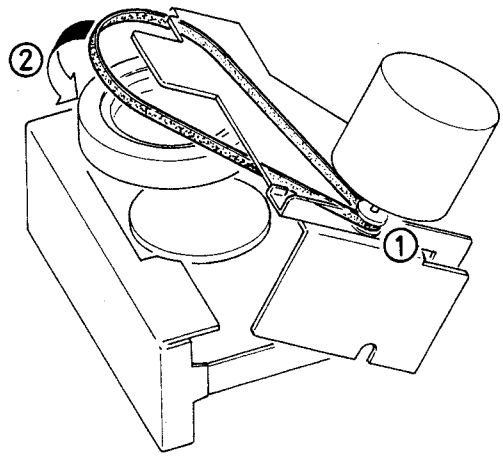


MECHANISM REPLACEMENT (DECK/AMP UNIT)

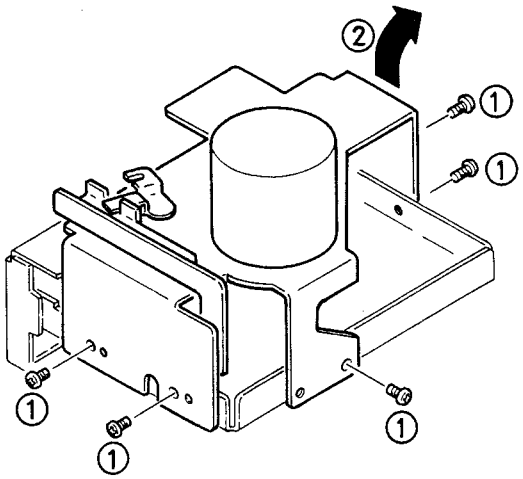
Note: Remove parts in order of disassembly as numbered.

(1) MOTOR AND BELT REPLACEMENT

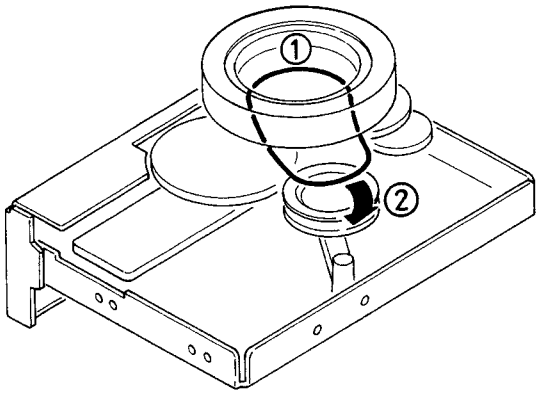
① Motor



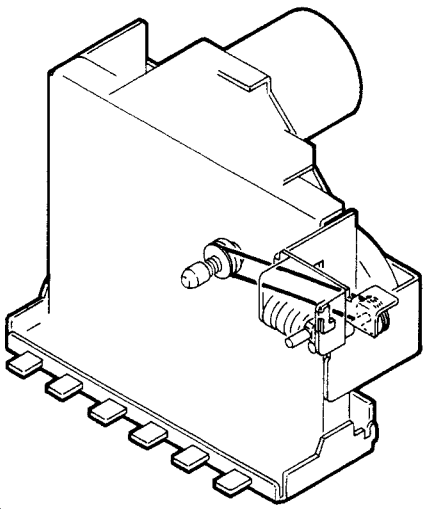
② Flat Belt, Flywheel



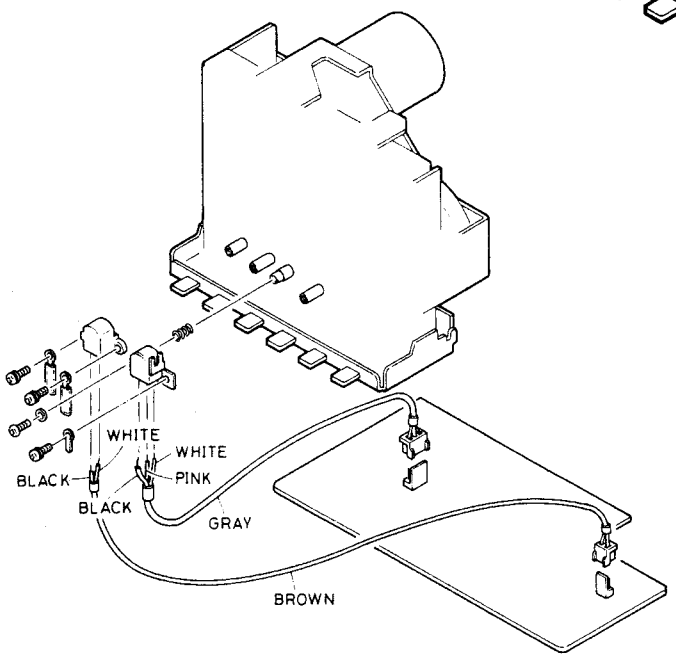
③ Square Belt, Idler



④ Square Belt, Counter



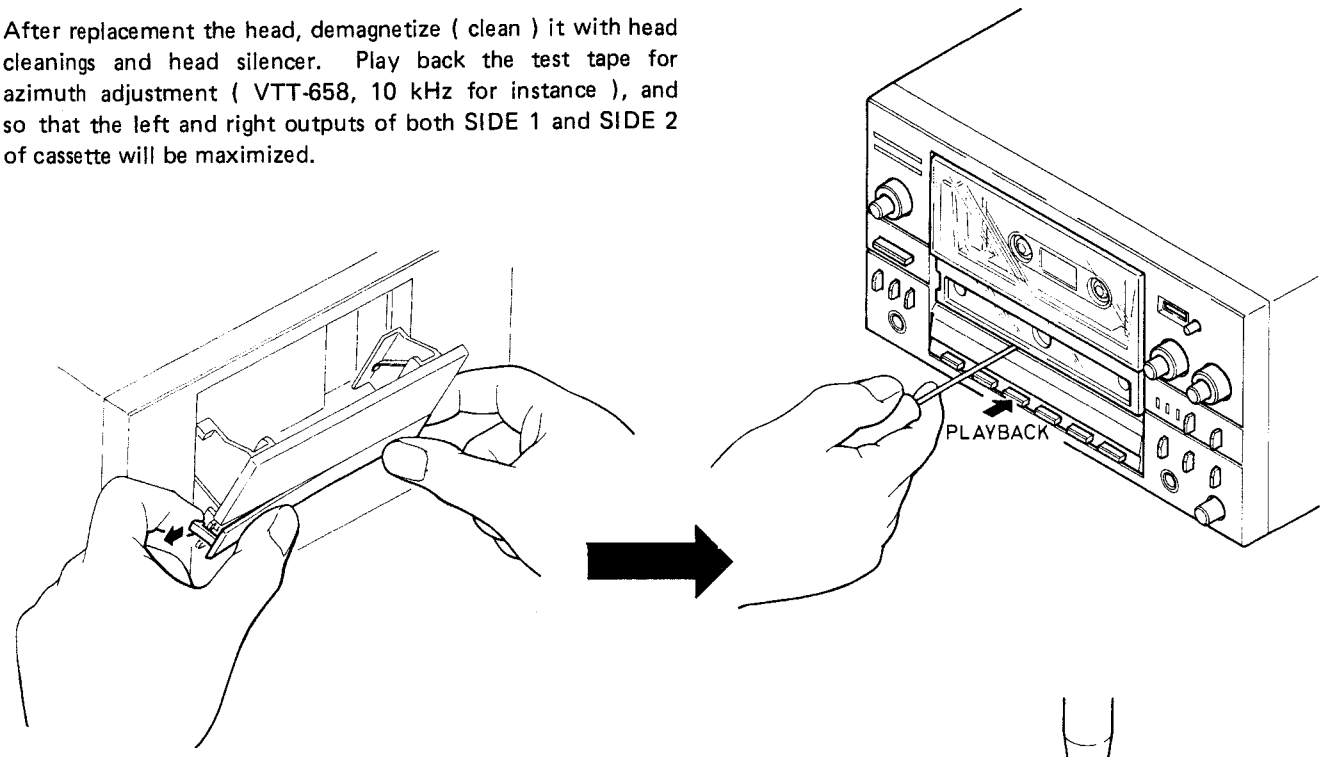
(2) HEAD REPLACEMENT



MECHANISM ADJUSTMENT (DECK/AMP UNIT)

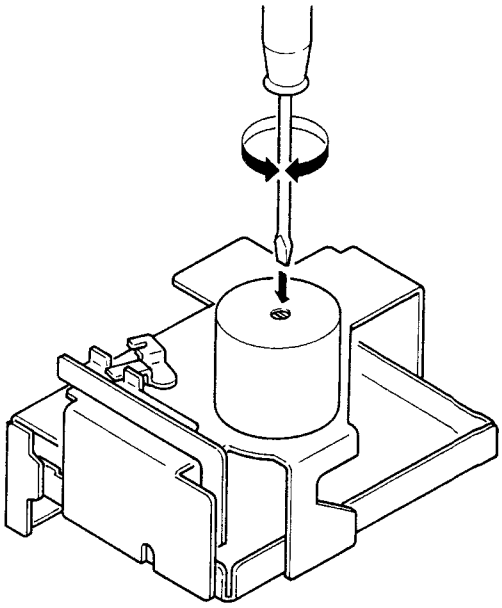
(1) HEAD AZIMUTH ADJUSTMENT

After replacement the head, demagnetize (clean) it with head cleanings and head silencer. Play back the test tape for azimuth adjustment (VTT-658, 10 kHz for instance), and so that the left and right outputs of both SIDE 1 and SIDE 2 of cassette will be maximized.



(2) MOTOR SPEED ADJUSTMENT

Play back the test tape (MTT-111, 3 kHz for instance), and turn the SVR located on the back of motor with blade screw driver so that the frequency counter will indicate 3,000Hz.



(3) MECHANISM TORQUE ADJUSTMENT

* Before measurement, clean the head, capstan and pinch roller.
* Check torque and tensions.

Item	Take up torque	Back tension	Tape tension
Cassette	PLAY : TW-2111 F.FWD/REW : TW-2231	PLAY/F.FWD : TW-2111 REW : Torque gauge	Drive Power Cassette TW-2412
PLAY	35 ~ 60 gr.cm	3 ~ 5 gr.cm	more than 180 gr
F.FWD	90 ~ 130 gr.cm	3 ~ 5 gr.cm	–
REW	90 ~ 130 gr.cm	4 ~ 8 gr.cm	–

DECK/AMP ADJUSTMENT (DECK/AMP UNIT)

Notes:

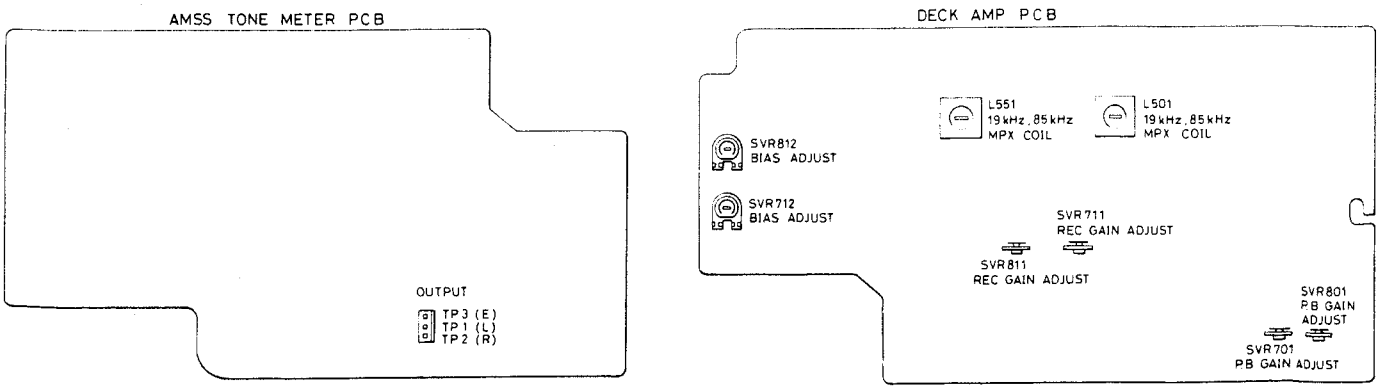
1. For adjustment, change over settings of switches, and controls to the following positions:
   REC. MUTE ⟶ OFF DOLBY NR ⟶ OFF LOUDNESS ⟶ OFF
   METAL/NORMAL ⟶ NORMAL MIC MIX VOL. ⟶ Minimum
   BAL. ⟶ Central VOL. ⟶ Minimum TRE. ⟶ Central BASS ⟶ Central
   PHONO/LINE IN ⟶ LINE IN BEAT CANCEL ⟶ 1

2. Conditions of adjustment

Power Supply voltage:	DC 13.5V or use power supply unit.
Input point in recording:	Tuner DIN 6p input area.
Reference of recording level:	Set the attenuator so that 1V at the input point becomes 0 dB.
Setting of recording level control (INPUT LEVEL) :	Set the INPUT LEVEL control in such position that the recording monitor output which appears over TP1 (TP2) – TP3 interval when 1 kHz is recorded at–22 dB level becomes 280mV.

ITEM OF ADJUSTMENT	TAPE USED	ADJUSTING METHOD
Reproducing output (P.B. GAIN)	DOLBY NR tape (MTT–150, for instance)	Reproduce DOLBY NR tape, and adjust SVR 701 (SVR 801) so that the reproducing output appearing over TP1 (TP2) ~ TP3 interval becomes 480 mV.
Recording / playback frequency response (BIAS)	Noiseless recording tape (AC 212, for instance)	Record 1 kHz and 10 kHz at –42dB level, and reproduce recording. Adjust SVR 712 (SVR 812) so that reproducing output existing over the TA1 (TR2) ~ TR3 interval becomes 0 dB for 1 kHz or 0 ± 3 dB for 10 kHz.
Recording/reproducing output	Noiseless recording tape (AC 212, for instance)	Record 1 kHz at –22 dB level. Adjust SVR 711 (SVR 811) so that the reproducing output which appears at the TP1 (TR2) ~ TR3 interval when reproducing thus recorded becomes 340mV.

PARTS LOCATION

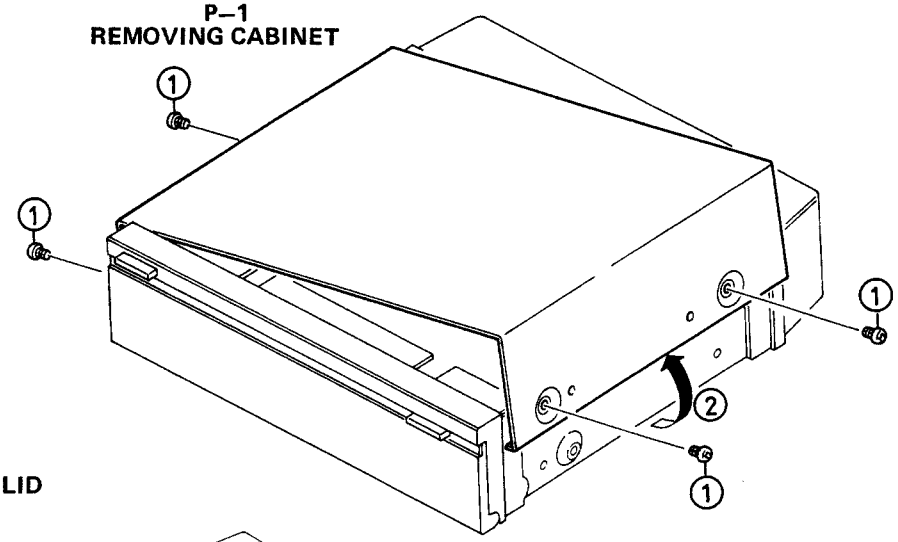


MC-Service

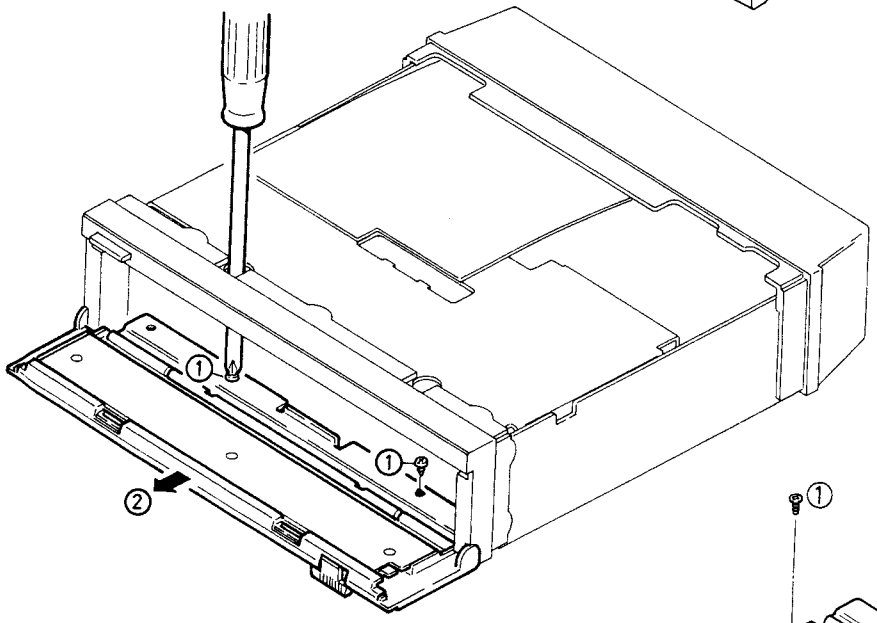
DISASSEMBLY (POWER SUPPLY UNIT)

Note : Remove parts in order of disassembly as numbered.

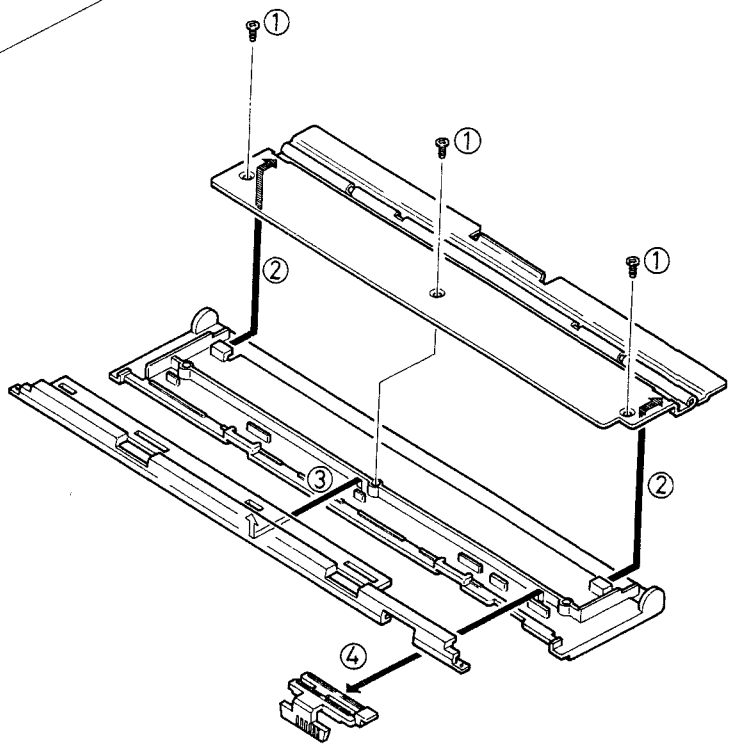
P–1
REMOVING CABINET



P–2
REMOVING COMPARTMENT LID



P–3
REMOVING ESCUTCHEON



PARTS LIST

Ref. No.	Part No.	Description	Q'ty
PACKING			
	141-6-133T-38000	Individual Carton, (Silver	1
	141-6-133T-38007	Individual Carton, (Gray)	1
	141-6-144T-83000	Foam Plastic Case, Top	1
	141-6-144T-83100	Foam Plastic Case, Bottom	1
	141-6-231T-50600	Inner Polye Cover, Set	1
	141-6-231T-25350	Inner Polye Cover,	1
	141-6-231T-40500	Inner Polye Cover, Speaker	2
	141-6-331T-12600	Protector Sheet, Set	1
	141-6-331T-07800	Protector Sheet, Speaker	2
	141-6-331T-10700	Protector Sheet, Speaker Box & Handle	1
	141-6-317T-40200	Pad, Inner	1
	141-6-317T-44600	Pad, Speaker Box	1
ACCESSORY			
	141-6-410T-80200	Instruction Manual	1
	4-243T-13080	Power Cord	1
	4-236T-11201	Plug Ass'y	1
*** HANDLE UNIT**			
H 1	141-2-171T-18201	Handle (Silver)	1
	141-2-171T-18241	Handle (Gray)	1
H 2	141-2-153T-77800	Escutcheon, Right Out-Side	1
H 3	141-2-153T-77900	Escutcheon, Left Out-Side	1
H 4	141-2-153T-78000	Escutcheon, Right In-Side	1
H 5	141-2-153T-78100	Escutcheon, Left In-Side	1
H 6	141-2-731T-99500	Slide, Right	1
H 7	141-2-731T-99800	Slide, Left	1
H 8	141-2-210T-37800	Bracket, Right	1
H 9	141-2-210T-37900	Bracket, Left	1
H10	141-2-271T-19200	Bracket Handle, Right	1
H11	141-2-271T-19201	Bracket Handle, Left	1
H12	141-2-447T-13200	Cushion, Slide	4
H13	141-2-352T-54100	Spacer, Rack Right (Silver)	1
	141-2-352T-54140	Spacer, Rack Right (Gray)	1
H14	141-2-352T-54101	Spacer, Rack Left (Silver)	1
	141-2-352T-54141	Spacer, Rack Left (Gray)	1
H15	141-2-310T-68300	Bracket, Rack (Silver)	2
	141-2-310T-68340	Bracket, Rack (Gray)	2
H16	141-2-246T-95300	Sheet, Cabinet	2
H17	141-2-135T-79200	Cover, Back (Silver)	1
	141-2-135T-79240	Cover, Back (Gray)	1
H18	141-2-174T-08500	Stand, Felt	4
H19	141-2-247T-10200	Sheet, Spacer	4
MOUNTING PARTS			
Y1		Oval Countersunk Hd. Screw 3 x 8mm	4
Y2		Oval Countersunk Hd. Screw 3 x 12mm	4
Y3		Binding Hd. Self-Tapping Screw 4 x 12mm	12
Y4		Flat Hd. Tapping Screw 3 x 10mm	4
*** TUNER UNIT**			
CABINET			
T 1	141-0-122T-41440	Front Panel Ass'y (Silver)	1
	141-0-122T-41460	Front Panel Ass'y (Gray)	1
T 2	141-2-111T-50100	Cabinet (Silver)	1
	141-2-111T-50140	Cabinet (Gray)	1
T 3	141-0-125T-26400	Bottom Lid Ass'y	1
T 4	141-2-135T-78803	Cover, AM Antenna (Silver)	1
	141-2-135T-78833	Cover, AM Antenna (Gray)	1
T 5	141-2-163T-84200	Rotary Knob, Tuning	1
T 6	141-2-163T-84300	Rotary Knob, Fine Tuning	1
T 7	141-2-447T-03900	Cushion, Cabinet	2

Ref. No.	Part No.	Description	Q'ty
CHASSIS			
T11	141-0-311T-39340	Chassis Ass'y (Silver)	1
	141-0-311T-39360	Chassis Ass'y (Gray)	1
T12	141-2-161T-99600	Push Button, Mode & Band Select	5
T13	141-2-538T-13300	Drum	1
T14	141-2-511T-22100	Pointer	1
T15	141-0-566T-12200	Tuning Shaft Ass'y	1
T16	141-2-340T-05000	Rope, 1200m/m	1
T17	141-2-855T-85500	Spring Coil	1
T18	141-2-464T-39100	Fixer	1
MOUNTING PARTS			
Y 1		Pan. Hd. Tapping Screw 2.3 x 6mm	1
Y 2		Pan. Hd. Tapping Screw 3 x 12mm	1
Y 3		Pan. Hd. Tapping Screw 3 x 20mm	1
Y 4		Pan. Hd. Tapping Screw W/Washer 3 x 20mm	1
Y 5		Binding Hd. Tapping Screw 3 x 8mm	8
Y 6		Binding Hd. Tapping Screw 3 x 10mm	1
Y 7		Binding Hd. Tapping Screw 3 x 12mm	1
Y 8		Flat Hd. Tapping Screw 3 x 8mm	1
Y 9		Binding Hd. Self-Tapping Screw 4 x 6mm	4
Y10		Hexagon Hd. Bolt 2.6 x 12mm	1
Y11		Hexagon Nut 3ϕ	1
Y12		External Thooth Lock Washer 3ϕ	1
ELECTRICAL PARTS			
T51	4-243T-23800	Read Cord 6pin	1
T52	4-244T-04571	Road Antenna	1
T53	141-2-382T-16500	Terminal 3p	1
TUNER P. C. B. ASS'Y			
T71	141-4-250T-18608	P.C.B. Ass'y, Tuner	1
L161,171, 155	4-257T-45601	Antenna Coil Ass'y, MW SW1	1
VC1 ~ 4 VCT1 ~ 4	4-224T-17700	Variable Capacitor	1
S1 ~ S4	4-238T-41100	Switch, Band & Mode	1
CT171,172	4-224R-11600	Trimmer, SW1	2
CT181,182	4-224R-11600	Trimmer, SW2	2
	4-237T-00100	Terminal Board	11
L102	4-265T-08200	VHF Coil, FM–RF	1
L104	4-265T-51340	VHF Coil, FM–OSC	1
L183	4-265R-00200	VHF Coil, SW2	1
L101	4-257T-29740	Antenna Coil, FM–ANT	1
L181	4-257T-28640	Antenna Coil, SW2–ANT	1
L164	4-258T-06440	OSC Coil, MW–OSC	1
L174	4-258T-33040	OSC Coil, SW1–OSC	1
L184	4-258T-07540	OSC Coil, SW2–OSC	1
T201	4-256T-05140	I F T, FM–1st	1
T202	4-256T-05140	I F T, FM–Det,	1
T151	4-256T-24040	I F T, AM–1st	1
T251	4-256T-24140	I F T, AM–2nd	1
CF201,202	4-256T-80400 4-256T-80471 4-256T-80472 4-256T-80473 4-256T-80474	or I. F. Filter, FM	2
CF251	4-256T-81100	I. F. Filter, AM	1
L153	4-253T-12720	Filter 10μH,FM-EXT Antenna	1
L151	4-253T-12714	Filter 3.3μH, AM-EXT Antenna	1
L154	4-253T-12725	Filter 27μH, AM-Bar Antenna	1
L173	4-253T-12714	Filter 3.3μH, SW1	1
L182	4-253T-12708	Filter 1μH, SW2	1
L103	4-253T-12714	Filter 3.3μH, FM MPX	1
L201	4-253T-12720	Filter 10μH, FM-IF	1
L152	4-253T-12716	Filter 4.7μH, FM-EXT Antenna	1
SVR301	4-222T-71175	Semi-Variable Resistor 10K ohm	1
SVR302	4-222T-71172	Semi-Variable Resistor 1K ohm	1

PARTS LIST

Ref. No.	Part No.	Description	Q'ty
TUNER P. C. B. ASS'Y			
Q101		F E T 2K212	1
Q102		Transistor 2SC2840	1
Q103		Transistor 2SC930 CONV	1
Q151		Transistor 2SC2839	1
Q161		Transistor 2SC930 CONV	1
Q171		Transistor 2SC930 CONV	1
Q181		Transistor 2SC930 CONV	1
Q302,303		Transistor 2SC536 AUD	2
D301,302 192,251		Diode DS442	4
D191		Varactor Diode 1S553	1
D102		Varactor Diode 1S553	1
IC201		IC HA12421A	1
IC301		IC LA3361	1
	RESISTORS All Resistors are Carbon T-type ¼W, ±5% unless otherwise noted.		
R102		10 ohm	1
R103		27K ohm	1
R104		6.8K ohm	1
R105		680 ohm	1
R106		68 ohm	1
R107		56 ohm	1
R111		15K ohm	1
R112		12K ohm	1
R113		1.5K ohm	1
R115,116		100K ohm	2
R151,154		3.3K ohm	2
R152		390K ohm	1
R155		1K ohm	1
R156		560 ohm	1
R161		15K ohm	1
R163		100 ohm	1
R164		33 ohm	1
R165		3.3K ohm	1
R166		100 ohm	1
R170		33 ohm	1
R171		15K ohm	1
R173		390 ohm	1
R174		33 ohm	1
R175		1.5K ohm	1
R176		100 ohm	1
R180		33 ohm	1
R181		15K ohm	1
R183		1K ohm	1
R184		47 ohm	1
R185		680 ohm	1
R186		100 ohm	1
R189		1K ohm	1
R179		100 ohm P-type	1
R191		100K ohm	1
R192		15K ohm	1
R193		560 ohm	1
R202		330 ohm	1
R203		330 ohm	1
R204		10K ohm	1
R205		6.8K ohm	1
R206		1M ohm	1
R207		33K ohm	1
R251		2.2K ohm	1
R252		15K ohm	1
R301		56 ohm	1
R302,303		3.3K ohm	2
R304,306		2.2K ohm	2
R305		1K ohm	1
R307		6.8K ohm	1
R321,322		8.2K ohm	2
R323		560K ohm	1
R324		270 ohm	1
R325		1.2K ohm	1
R326		4.7K ohm	1
R331,332		8.3K ohm	2
R333		560K ohm	1
R334		270 ohm	1
R335		1.2K ohm	1
R336		4.7K ohm	1
R351		1.5K ohm	1

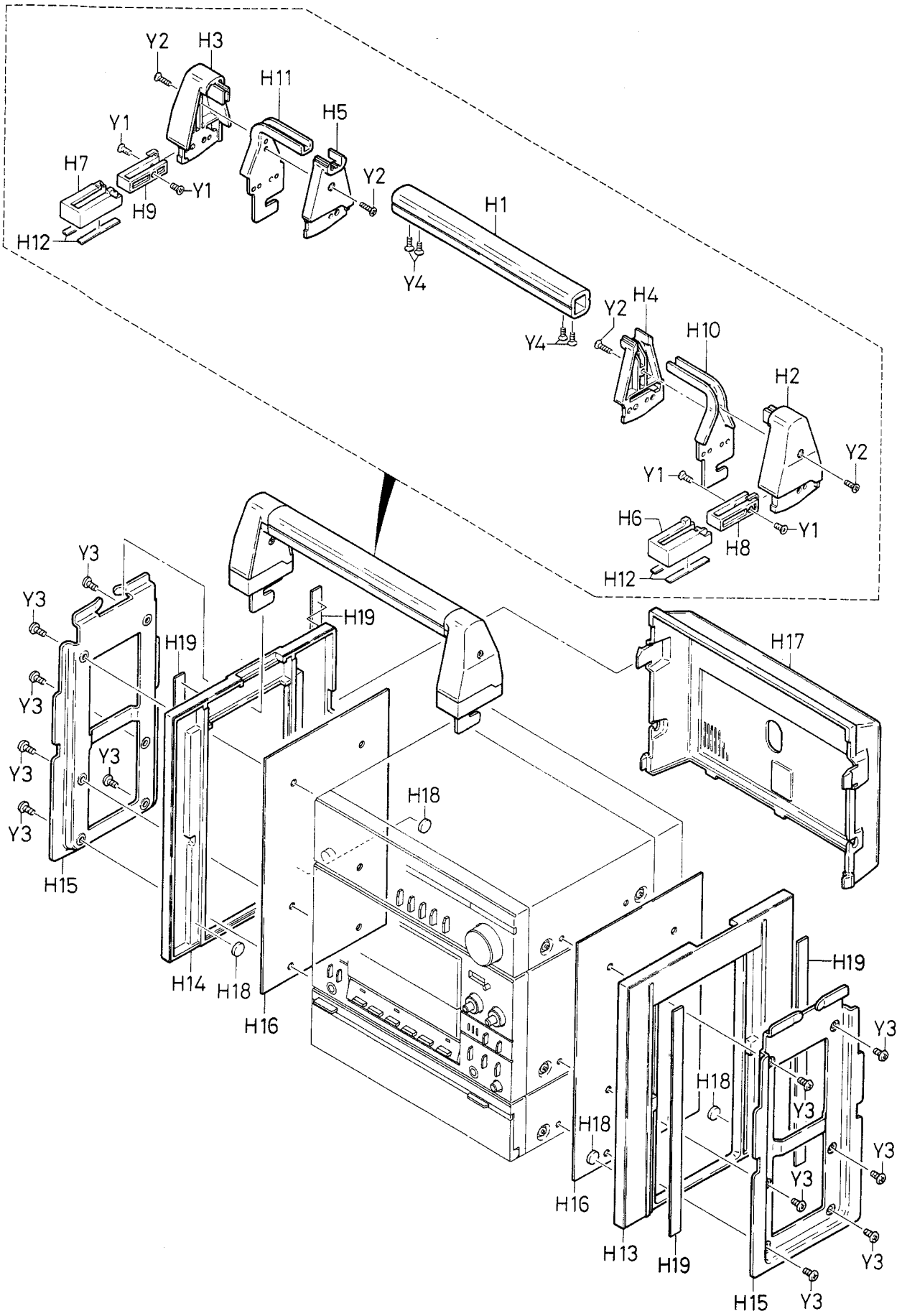
Ref. No.	Part No.	Description	Q'ty
TUNER P. C. B. ASS'Y			
	CAPACITORS		
C164		P P Con 330pF ±5% 100V	1
C174		P P Con 0.0015μF ±5% 100V	1
C307		P P Con 0.001μF ±5% 100V	1
C184		Mylar 0.0047μF ±10% 50V	1
C151,103		Ceramic 22pF ±10% 50V	2
C102		Ceramic 18pF ±10% 50V	1
C104		Ceramic 0.0022μF +80–20% 50V	1
C106		Ceramic 2pF ±0.25pF 50V	1
C107		Ceramic 68pF ±10% 50V	1
C108,111		Ceramic 0.01μF +80–20% 50V	2
C112		Ceramic 1pF NPO ±0.25pF 50V	1
C113		Ceramic 15pF NPO ±5% 50V	1
C114		Ceramic 20pF N150 ±5% 50V	1
C115		Ceramic 33pF NPO ±5% 50V	1
C116		Ceramic 15pF NPO ±5% 50V	1
C117		Ceramic 0.01μF +80–20% 50V	1
C118		Ceramic 4pF ±0.25pF 50V	1
C121,122		Ceramic 0.047μF +80–20% 50V	2
C150		Ceramic 10pF ±10% 50V	1
C152		Ceramic 470pF ±10% 50V	1
C153,154, 155		Ceramic 0.01μF +80–20% 50V	3
C156		Ceramic 10pF ±10% 50V	1
C101		Ceramic 20pF ±10% 50V	1
C161		Ceramic 6pF ±0.5pF 50V	1
C165		Ceramic 10pF N3300 ±5% 50V	1
C175		Ceramic 3pF N4700 ±0.25pF 50V	1
C181		Ceramic 6pF ±0.5pF 50V	1
C185		Ceramic 10pF N3300 ±5% 50V	1
C191		Ceramic 0.022μF +80–20% 50V	1
C193		Ceramic 10pF ±10% 50V	1
C194		Ceramic 0.047μF +80–20% 50V	1
C201,202, 203,204		Ceramic 0.022μF +80–20% 50V	4
C208		Ceramic 100pF ±10% 50V	1
C212		Ceramic 0.047μF +80–20% 50V	1
C221		Ceramic 0.022μF +80–20% 50V	1
C250		Ceramic 330pF ±10% 50V	1
C322,332		Ceramic 0.0015μF ±10% 50V	2
C323,333		Ceramic 820pF ±10% 50V	2
C300		Ceramic 100pF ±10% 50V	1
C162,163, 172		BC Con 0.01μF ±20% 25V	3
C173,183		BC Con 0.0033μF ±20% 25V	2
C182		BC Con 0.0047μF ±20% 25V	1
C205		BC Con 0.022μF ±20% 25V	1
C207,252, 253		BC Con 0.01μF ±20% 25V	3
C254,306		BC Con 0.022μF ±20% 25V	2
C304,305		BC Con 0.015μF ±20% 25V	2
C192		Electrolytic 0.47μF 50V	1
C206		Electrolytic 100μF 10V	1
C211		Electrolytic 4.7μF 25V	1
C222		Electrolytic 47μF 10V	1
C251		Electrolytic 1μF 50V	1
C255		Electrolytic 22μF 10V	1
C301		Electrolytic 100μF 10V	1
C302		Electrolytic 4.7μF 25V	1
C308,313		Electrolytic 1μF 50V	2
C311		Electrolytic 0.47μF 50V	1
C312		Electrolytic 2.2μF 50V	1
C321,324, 331,334		Electrolytic 0.47μF 50V	4
STEREO LED P. C. B. ASS'Y			
T72	141-4-250T-18700	P.C.B. Ass'y, Stereo LED	1
D303		LED SLP144B Red	1
FINE TUNING P. C. B. ASS'Y			
T73	141-4-250T-18800	P.C.B. Ass'y, Fine Tuning	1
VR191	4-222T-96600	Variable Resistor 10K ohm	1

PARTS LIST

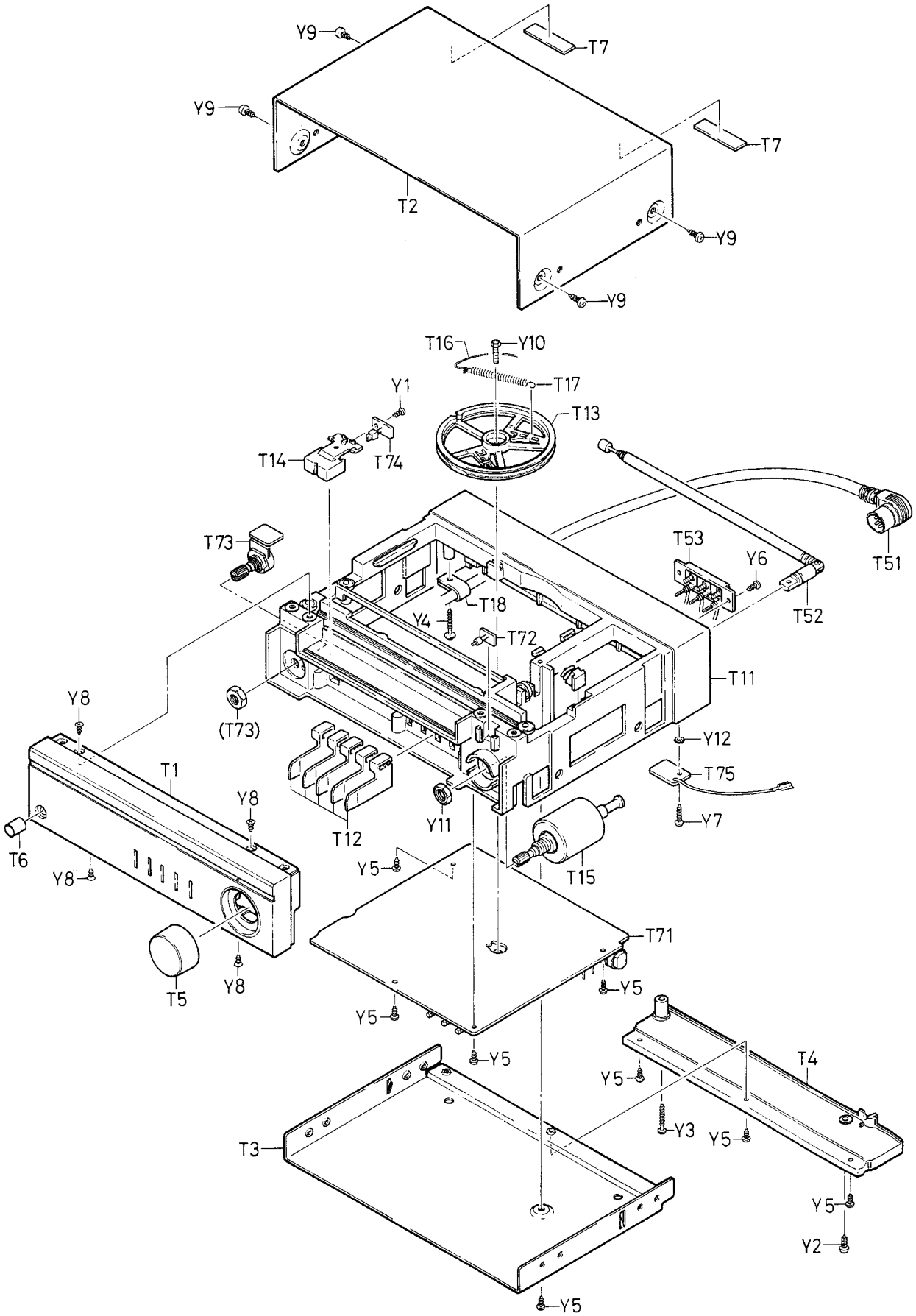
Ref. No.	Part No.	Description	Q'ty
POINTER LED P. C. B. ASS'Y			
T74	141-4-250T-18900	P.C.B. Ass'y, Pointer LED	1
D351		LED SLP141B Red	1
ANTENNA P. C. B. ASS'Y			
T75	141-4-250T-27900	P.C.B. Ass'y, Antenna	1
	4-240T-25300	Socket	1
C100		Ceramic 47pF ±10% 50V	1
*** DECK UNIT**			
CABINET & CHASSIS			
D 1	141-0-122T-40840	Front Panel Ass'y (Silver)	1
	141-0-122T-40860	Front Panel Ass'y (Gray)	1
D 2	141-2-111T-49900	Cabinet (Silver)	1
	141-2-111T-49940	Cabinet (Gray)	1
D 3	141-2-119T-01800	Back Panel (Silver)	1
	141-2-119T-01830	Back Panel (Gray)	1
D 4	141-0-125T-26100	Bottom Lid Ass'y	1
D 5	141-2-163T-83900	Rotary Knob, TONE (BASS) BALANCE (Outor)	2
D 6	141-2-163T-84000	Rotary Knob, TONE (TRE) VOLUME (Inner)	2
D 7	141-2-163T-83901	Rotary Knob, INPUT LEVEL (L) (Outer)	1
D 8	141-2-163T-84001	Rotary Knob, INPUT LEVEL (R) (Inner)	1
D 9	141-2-163T-84100	Rotary Knob, MIC MIX VOL	1
D10	141-2-853T-55100	Spring Plate, Rotary Knob	3
D11	141-2-161T-99100	Push Button, Mechanism	6
D12	141-2-161T-99200	Push Button, Select•AMSS• Loudness	5
D13	141-2-161T-99300	Push Button, REC Mute•Tape• Dolby	3
D14	141-2-156T-30500	Cup Knob, Eject	1
D15	141-2-153T-73340	Escutcheon (Silver), Head Azimuth	1
	141-2-153T-73360	Escutcheon (Gray)	1
D16	141-2-124T-33100	Top Lid (Silver), Cassette	1
	141-2-124T-33140	Top Lid (Gray)	1
D17	141-2-742T-72500	Lever, Cassette	1
D18	141-0-224T-12500	Bracket Lid Ass'y (Silver), Cassette	1
	141-0-224T-12540	Bracket Lid Ass'y (Gray)	1
D19	141-2-754T-07400	Shaft, Cassette	2
D20	141-2-855T-82600	Spring Coil, Cassette	1
D21	141-2-210T-35700	Bracket, Gear	1
D22	141-2-853T-73900	Spring Plate, Mecha-Button Earth	1
D23	141-0-581T-07100	Gear Ass'y	1
D24	141-2-310T-64900	Bracket, Gear	1
D25	141-2-210T-35500	Bracket, Left	1
D26	141-2-210T-35400	Bracket, Right	1
D27	141-2-310T-64500	Bracket, Mic Mix VR	1
D28	141-2-310T-64700	Bracket, Input Level VR	1
D29	141-2-310T-64600	Bracket, Tone, Blance, Volume VR	1
D30	141-2-315T-24300	Reinforcement, Right	1
D31	141-2-315T-24400	Reinforcement, Left	1
D32	141-2-315T-25900	Reinforcement, Back	1
D33	141-2-310T-64800	Bracket, Mechanism	1
D34	141-2-742T-72700	Lever, Eject	1
D35	141-2-462T-21500	Boss, Eject	1
D36	141-2-855T-80300	Spring Coil, Eject	2
D37	141-2-742T-72600	Lever, Eject Lock	1
D38	141-2-462T-69200	Boss, Eject Lock	1
D39	141-2-253T-30000	Joint, Eject	1
D40	141-2-253T-29800	Joint, REC Mute • Tape• Dolby	3
D41	141-2-731T-91600	Slide, Rec	1
D42	141-2-742T-74700	Lever, Rec	1
D43	141-2-462T-68400	Boss, Rec	1
D44	141-2-855T-77600	Spring Coil, Rec Slide	1
D45	141-2-742T-72800	Lever, Rec SW.	1

Ref. No.	Part No.	Description	Q'ty
CABINET & CHASSIS			
D46	141-2-855T-82500	Spring Coil, Rec SW.	1
D47	141-2-464T-39000	Fixer (Silver)	3
	141-2-464T-39030	Fixer (Gray)	3
D48	141-2-472T-01001	Lug	1
D49	141-2-447T-46200	Cushion 15 x 25 x 3mm	2
D50	141-2-811T-10100	Counter	1
D51	141-2-812T-10700	Bracket Counter	1
D52	141-2-564T-25800	Square Belt	1
D53	141-2-464T-20671	Fixer	8
D54	141-2-246T-15200	Sheet	2
MOUNTING PARTS			
Y 1		Pan. Hd. Screw 2 x 4mm	2
Y 2		Pan. Hd. Screw 2 x 6mm	1
Y 3		Pan. Hd. Tapping Screw 2.3 x 6mm	6
Y 4		Pan. Hd. Tapping Screw 2.6 x 8mm	2
Y 5		Pan. Hd. Forming Screw 2.6 x 6mm	2
Y 6		Pan. Hd. Forming Screw 3 x 4mm	8
Y 7		Pan. Hd. Forming Screw 3 x 6mm	5
Y 8		Pan Hd. Forming Screw 3 x 8mm	2
Y 9		Binding Hd. Screw 3 x 6mm	2
Y10		Binding Hd. Tapping Screw 3 x 6mm	2
Y11		Binding Hd. Tapping Screw 3 x 8mm	30
Y12		Binding Hd. Tapping Screw 3 x 10mm	4
Y13		Binding Hd. Tapping Screw 3 x 12mm	2
Y14		Binding Hd. Self-Tapping Screw 4 x 6mm	4
Y15		Washer 3φ	1
Y16		Tooh Lock Washer 3φ	2
ELECTRICAL PARTS			
D61	141-2-368T-23302	Heat Sink (IC781,881)	1
D62	141-2-382T-20100	Terminal, Earth	1
D63	4-243T-21500	Lead Cord, 7p	1
D64	4-243T-21600	Lead Cord, 10p	1
D65	141-2-322T-70100	Shield Plate	1
D66	141-2-352T-55000	Spacer, Shield Plate	1
DECK AMP P. C. B. ASS'Y			
D71	141-4-250T-52300	P.C.B. Ass'y, Deck Amp	1
S2	4-238T-36500	Push Switch, REC MUTE	1
S3	4-238T-23671	Switch, DOLBY	1
S4	4-238T-23700	Switch, TAPE SELECTOR	1
	4-238T-36800	Switch, R/P	1
S5	4-231T-65200	Switch, BEAT CANCEL	1
SVR712,812	4-222T-71178	Semi-Variable Resistor 100K ohm	2
SVR701,801, 711,811	4-222T-85876	Semi-Variable Resistor 20K ohm	4
L601	4-258T-28900	O. S. C. Coil	1
L501,551	4-255T-02571	MX Coil	2
L712,812	4-255T-02371	MX Coil	2
L711,811	4-253T-01006	Hi-Frequncy Choke Coil	2
L602	4-252T-06300	Choke Coil	1
	4-236T-19700	Plug, 2P E Head	1
	4-236T-19771	Plug, 3p R/P Head	1

EXPLODED VIEW (HANDLE UNIT)



EXPLODED VIEW (TUNER UNIT)

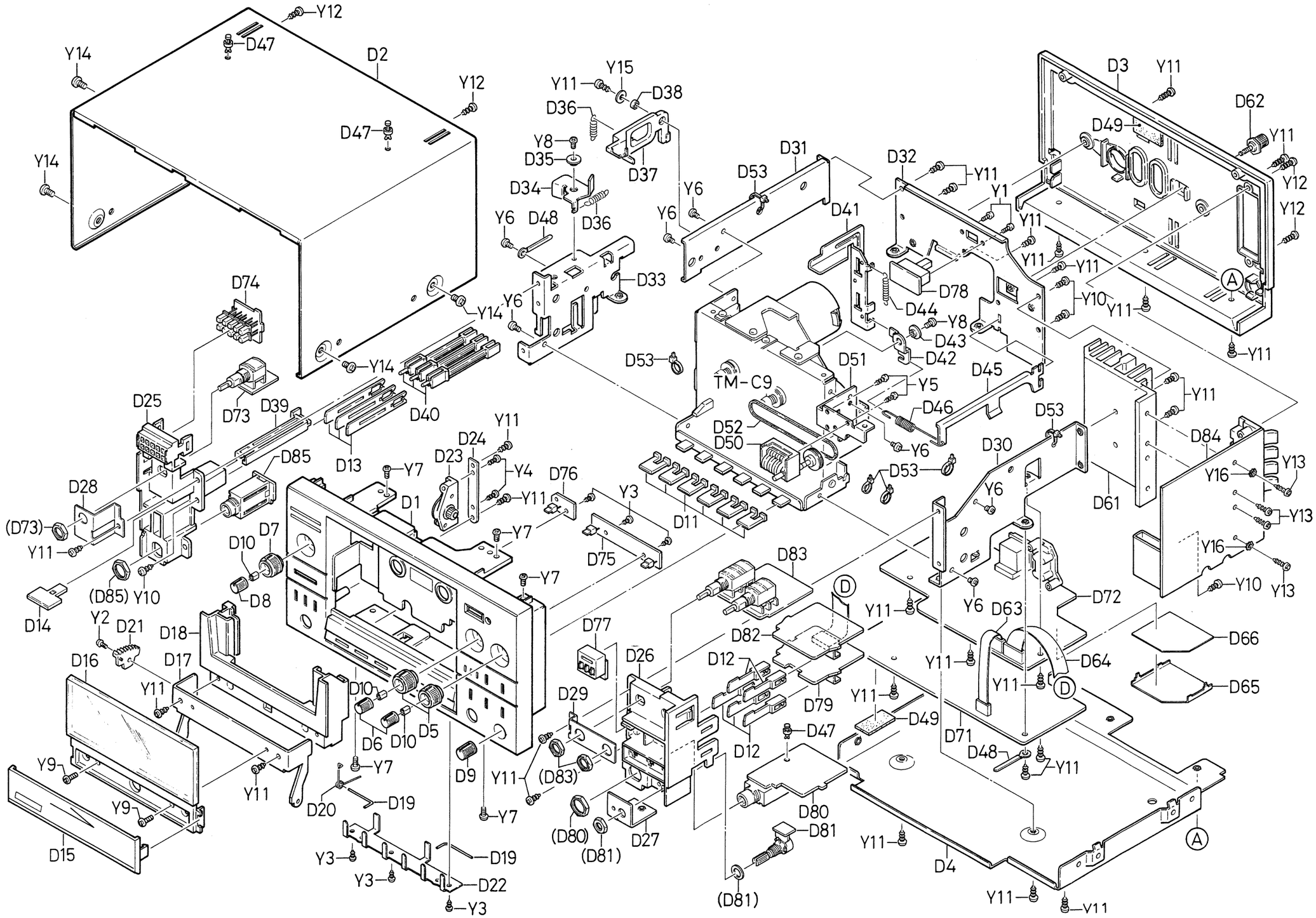


PARTS LIST

Ref. No.	Part No.	Description	Q'ty
DECK AMP P. C. B. ASS'Y			
	4-240T-17773	Socket 7p	1
	4-240T-16800	Socket 3p	1
IC501,551		IC NE646NY	2
IC701		IC LA3160T	1
Q713,813, 714,814		Transistor 2SC536 AUD	4
Q605,606		Transistor 2SC945	2
Q711,811, 602,604		Transistor 2SC2785	4
Q712,812, 603		Transistor 2SD1012	3
Q601		Transistor 2SB808	1
D601,603, 604		Diode GMA01	3
D602		Diode DS442	1
	CAPACITORS		
C716,816		Electrolytic 1μF 50V	2
C711,811		Electrolytic 1μF 50V	2
C514,564		Electrolytic 0.33μF 50V	2
C513,563		Electrolytic 0.1μF 50V	2
C713,813		Electrolytic 10μF 25V	2
C701,801, 706,806, 504,554		Electrolytic 4.7μF 25V	6
C506,556, 712,812		Electrolytic 4.7μF 25V	4
C501,551		Electrolytic 2.2μF 25V	2
C961		Electrolytic 220μF 16V	1
C509,559, 512,562		Electrolytic 10μF 16V	4
C515,963		Electrolytic 220μF 10V	2
C704,804, 962,601		Electrolytic 100μF 10V	4
C607		P P Con 0.012μF ±5% 100V	1
C511,561		BC Con 0.047μF ±5% 25V	2
C705,805, 606		BC Con 0.033μF ±5% 25V	3
C510,560, 715,815		BC Con 0.027μF ±5% 25V	4
C714,814		BC Con 0.022μF ±5% 25V	2
C603		BC Con 0.015μF ±20% 25V	1
C507,557		BC Con 0.0056μF ±5% 25V	2
C508,558		BC Con 0.0047μF ±5% 25V	2
C604,605		BC Con 0.0033μF ±10% 25V	2
C703,803, 505,555, 602		Ceramic 0.001μF ±10% 50V	5
C702,802		Ceramic 680pF ±10% 50V	2
C717,817		Ceramic 470pF ±10% 50V	2
C502,552, 718,818, 609		Ceramic 220pF ±10% 50V	5
C608		Ceramic 100pF ±10% 50V	1
	RESISTORS All resistors are Carbon T-type 1/6W, ±5% unless otherwise noted.		
R961		10 ohm FP P-type ¼W	1
R601		220 ohm P-type ½W	1
R963		330 ohm ¼W	1
R962		47 ohm ¼W	1
R602		15 ohm ¼W	1
R702,802		100K ohm	2
R704,804		4.7K ohm	2
R703,803		3.3K ohm	2
R701,801		56 ohm	2
R705,805, 706		22K ohm	3
R508,558		1M ohm	2
R507,557		270K ohm	2
R505,555		180K ohm	2
R506,556		47K ohm	2
R501,551		33K ohm	2
R504,554		3.3K ohm	2
R503,553		180 ohm	2
R712,812		47K ohm	2
R714,814		2.2K ohm	2
R711,811		1K ohm	2

Ref. No.	Part No.	Description	Q'ty
DECK AMP P. C. B. ASS'Y			
	RESISTORS		
R713,813		5.6 ohm	2
R718,818		150K ohm	2
R722,822, 724,824		33K ohm	4
R717,817		22K ohm	2
R720,820		10K ohm	2
R721,821, 715,815		4.7K ohm	4
R716,816		3.3K ohm	2
R723,823		2.7K ohm	2
R719,819		1.2K ohm	2
R725,825		5.6K ohm	2
R605,607		33K ohm	2
R604,606, 608		4.7K ohm	3
R603,402		1K ohm	2
R401		100 ohm	1
R609		5.6 ohm	1
AMSS • PHONE • METER P. C. B. ASS'Y			
D72	141-4-250T-52400	P.C.B. Ass'y, AMSS, Phone, Meter	1
	4-240T-06900	Socket, Phono/Line In-Line Out	1
	4-240T-08900	Socket, Tuner	1
	4-240T-17773	Socket, 7p	1
	4-240T-17776	Socket, 10p	1
	4-240T-16900	Socket, 3p	1
	4-240T-11278	Socket, 12p	1
	4-236T-19700	Plug, 2p	1
	4-236T-19771	Plug, 3p	1
	4-236T-19772	Plug, 4p	2
	4-236T-19776	Plug, 8p	1
L951	4-252T-04700	Choke Coil	1
IC421		IC LC7510	1
IC731		IC LA3160T	1
IC741,841		IC BA6124	2
Q715,815		Transistor 2SD1012	2
Q741,841, 742,842, 743,423, 424,425, 426,427, 429		Transistor 2SC536 AUD SP	11
Q401,402, 403,404, 421,422		Transistor 2SC2785	6
Q405,428		Transistor 2SA608 SP	2
Q951		Transistor 2SD612	1
D954		Zener Diode GZA12	1
D424,427		Zener Diode GZA6.2	2
D401		Zener Diode GZA4.7	1
D425		Diode DS135	1
D904,405, 406,428		Diode GMA01	4
D402,403, 407,426, 429		Diode DS442	5
	CAPACITORS		
C421,741, 841,742, 842,402, 423,424, 425,427, 954		Electrolytic 1μF 50V	11
C428		Electrolytic 10μF 25V	1
C403,404, 430		Electrolytic 4.7μF 25V	3
C401		Electrolytic 2.2μF 25V	1
C951,952		Electrolytic 47μF 16V	2
C429		Electrolytic 100μF 10V	1
C426		BC Con 0.01μF ±5% 25V	1
C953		Ceramic 0.022μF +80–20% 50V	1
C422		Ceramic 0.001μF ±10% 50V	1

EXPLODED VIEW (DECK/AMP UNIT)



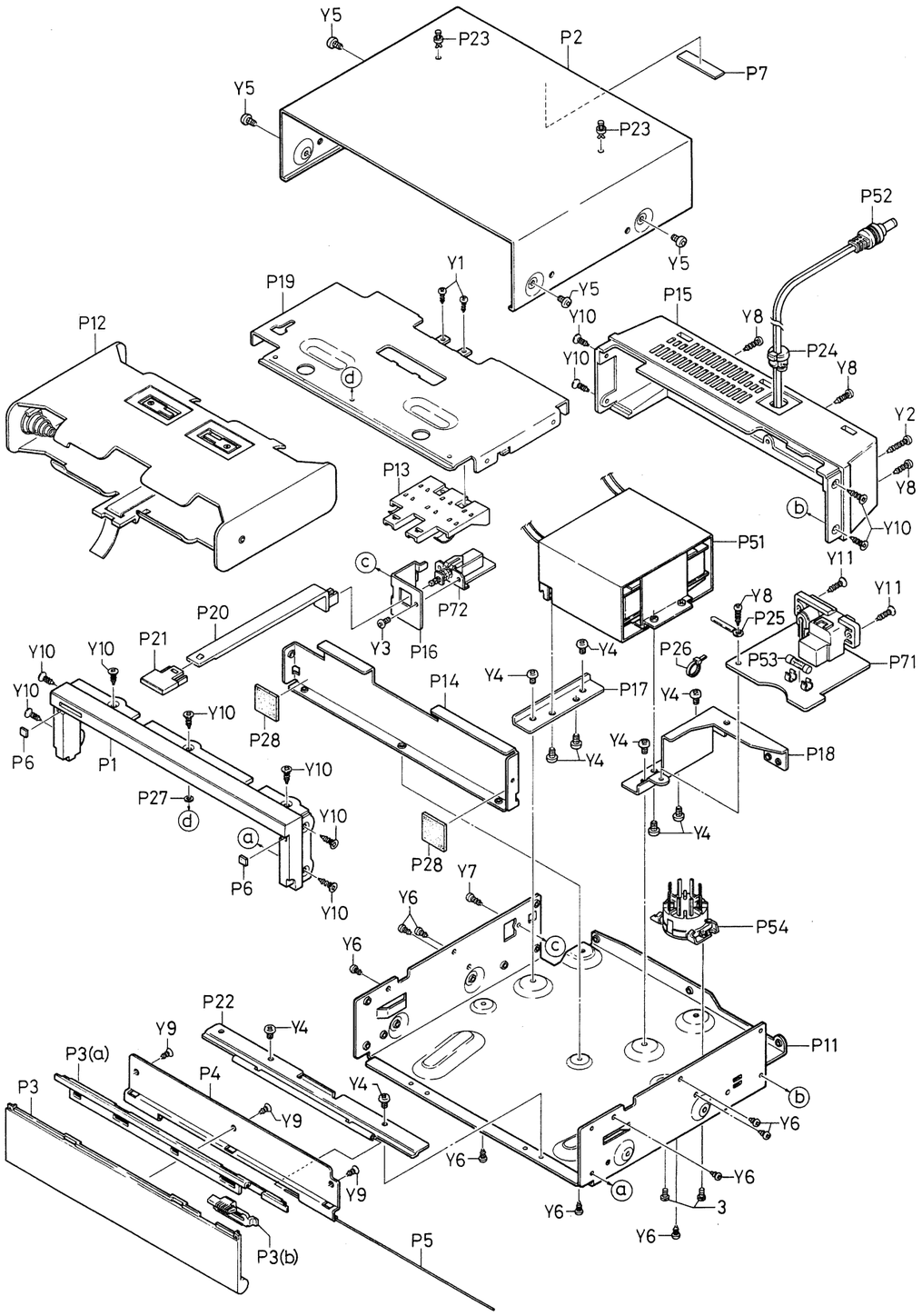
Ref. No.	Part No.	Description	Q'ty
AMSS • PHONO • METER P. C. B. ASS'Y			
	CAPACITORS		
C732,832		Electrolytic 4.7μF 25V	2
C727,837		Electrolytic 2.2μF 25V	2
C734,834, 942		Electrolytic 100μF 10V	3
C735,835		BC Con 0.039μF ±10% 25V	2
C736,836		BC Con 0.012μF ±10% 25V	2
C731,831, 733,833		Ceramic 100pF ±10% 50V	4
C943		Ceramic 0.01μF +80–20% 50V	1
C744,844 941		Electrolytic 10μF 25V	3
C743,843		BC Con 0.047μF ±20% 25V	2
	RESISTORS All resistors are Carbon T-type 1/6W, ±5% unless otherwise noted.		
R951		1 ohm FP P-type ¼W	1
R955		1.5K ohm P-type ¼W	1
R441		180 ohm ¼W	1
R742,842, 743,843, 407		390K ohm	5
R403,404, 405,406		100K ohm	4
R727,827		27K ohm	2
R707,807, 728,828, 411		22K ohm	5
R741,841		15K ohm	2
R726,826, 409,412, 413,414		10K ohm	6
R725,825		5.6K ohm	2
R410		3.9K ohm	1
R408		1K ohm	1
R415		120 ohm	1
R427		390K ohm	1
R429		150K ohm	1
R434		100K ohm	1
R423		56K ohm	1
R433,436		47K ohm	2
R443		39K ohm	1
R421		33K ohm	1
R428		22K ohm	1
R438,442, 446,447, 448		10K ohm	5
R450		5.6K ohm	1
R422,435, 445		4.7K ohm	3
R430,449		3.9K ohm	2
R953,954		1.5K ohm	2
R426		1.2K ohm	1
R437,956		1K ohm	2
R440		820 ohm	1
R952		560 ohm	1
R424		120 ohm	1
R439		12K ohm	1
R425		3.3K ohm	1
R942		220 ohm P-type, ¼W	1
R832,735, 835,737, 837		100K ohm	5
R736,836		6.8K ohm	2
R831		1K ohm	1
R734,834, 738,838		560 ohm	4
R733,833		150 ohm	2
R732		100K ohm V-type,¼W	1
R731		1K ohm V-type, ¼W	1
R941		Metal 270 ohm, P-type, 1W	1
R746,846		820K ohm	2
R748,848		270K ohm	2
R745,845		150K ohm	2
R744,844		100K ohm	2
R747,847		68K ohm	2
R755		33K ohm	1

Ref. No.	Part No.	Description	Q'ty
AMSS • PHONE • METER P. C. B. ASS'Y			
	RESISTORS		
R756		27K ohm	1
R749,849		10K ohm	2
R754		2.2K ohm	1
R750,751, 752,753		390 ohm	4
R850,851, 852,853		390 ohm	4
INPUT LEVEL VOLUME P. C. B. ASS'Y			
D73	141-4-250T-52500	P.C.B. Ass'y, Input Level Volume	1
VR701,801	4-222T-93800	Variable Resistor 50K ohm (A)	1
	4-236T-19771	Plug, 3p	2
VU/SOUND METER P. C. B. ASS'Y			
D74	141-4-250T-52600	P.C.B. Ass'y, VU/Sound Meter	1
D741,841, 742,842, 743,843		LED SLP153B Red	6
D744,844, 745,845		LED SLP153B Red	4
PLAY/PAUSE LED P. C. B. ASS'Y			
D75	141-4-250T-52700	P.C.B. Ass'y, Play/Pause LED	1
	4-240T-17100	Socket, 4p	1
D952,953		LED SLP151B B Red	2
REC LED P. C. B. ASS'Y			
D76	141-4-250T-52800	P.C.B. Ass'y, REC LED	1
D951		LED SLP151B B Red	1
AMSS LED P. C. B. ASS'Y			
D77	141-4-250T-52900	P.C.B. Ass'y, AMSS LED	1
	4-240T-17000	Socket, 4p	1
	141-2-210T-35600	Bracket	1
D421,422, 423		LED SLP151B B Red	3
PHONO/LINE IN SWITCH P. C. B. ASS'Y			
D78	141-4-250T-53000	P.C.B. Ass'y, Phono/Line In SW.	1
	4-238T-52500	Slide Switch	1
SELECTOR P. C. B. ASS'Y			
D79	141-4-250T-53100	P.C.B. Ass'y, Selector	1
	4-238T-36600	Push Switch	1
	4-240T-17876	Socket, 10p	1
R739,839		Carbon 5.6K ohm V-type, ¼W ±5%	2

Ref. No.	Part No.	Description	Q'ty
MIX • MIC • AMP P. C. B. ASS'Y			
D80	141-4-250T-53200	P.C.B. Ass'y, Mix • Mic • Amp (Silver)	1
	141-4-250T-53201	P.C.B. Ass'y, Mix • Mic • Amp (Gray)	1
	4-240T-13280	Socket (Silver)	1
	4-240T-19500	Socket (Gray)	1
IC761		IC LA3160T	1
Q761		Transistor 2SC2320 NF	1
	CAPACITORS		
C761,861, 769		Electrolytic 1μF 50V	3
C765,865, 767		Electrolytic 2.2μF 25V	3
C763,863		Electrolytic 10μF 16V	2
C931		Electrolytic 100μF 10V	1
C932		Electrolytic 47μF 10V	1
C768		Ceramic 220pF ±10% 50V	1
C762,862		Ceramic 100pF ±10% 50V	2
	RESISTORS All resistors are Carbon T-type 1/6W, ±5% unless otherwise noted.		
R770		1M ohm	1
R767,867		220K ohm	2
R761,861, 765,865		100K ohm	4
R766,866		47K ohm	2
R763,863		27K ohm	2
R762,862		18K ohm	2
R768		15K ohm	1
R772,774, 874		10K ohm	3
R764,864		3.9K ohm	2
R932		1K ohm	1
R769,931, 773,873, R771		100 ohm	4
		82 ohm	1
MIX • MIC • VOLUME P. C. B. ASS'Y			
D81	141-4-250T-53300	P.C.B. Ass'y, Mix • Mic • Volume	1
VR761	4-222T-93900	Variable Resistor 50K ohm (B)	1
LOUDNESS AMSS SWITCH P. C. B. ASS'Y			
D82	141-4-250T-53400	P.C.B. Ass'y, Loudness AMSS SW.	1
	4-238T-36700	Push Switch, Loudness AMSS	1
	4-240T-17200	Socket, 2p	1
C772,872		BC Con 0.022μF ±5% 25V	2
C771,871		Ceramic 470pF ±10% 50V	2
R775,875		Carbon 12K ohm T-type ±5% 1/6W	2
TONE AMP P. C. B. ASS'Y			
D83	141-4-250T-53500	P.C.B. Ass'y, Tone Amp	1
VR781	4-222T-94000	Variable Resistor, Balance 250K ohm (W) Volume 100K ohm (B)	1
VR782,882			
VR783,883	4-222T-94100	Variable Resistor, Bass Treble 100K ohm (A)	1
VR784,884			
	4-240T-11271	Socket, 4p	2
Q771,871		Transistor 2SC2320 NF	2
	CAPACITORS		
C773,873		Electrolytic 1μF 50V	2
C775,875		Electrolytic 2.2μF 25V	2
C925		Electrolytic 100μF 10V	1
C777,877		Mylar 0.12μF ±5% 50V	2
C776,876		BC Con 0.027μF ±5% 25V	2
C779,879		BC Con 0.018μF ±5% 25V	2

Ref. No.	Part No.	Description	Q'ty
TONE AMP P. C. B. ASS'Y			
	CAPACITORS		
C778,878		BC Con 0.0039μF ±5% 25V	2
C774,874		Ceramic 220pF ±10% 50V	2
	RESISTORS All resistors are Carbon T-type 1/6W, ±5% unless otherwise noted.		
R778,878		1M ohm	2
R777,877, 783,883		220K ohm	4
R781,881		15K ohm	2
R780,880		4.7K ohm	2
R782,882		3.3K ohm	2
R779,879		1K ohm	2
R776,876		1K ohm	2
R923		560 ohm	1
POWER AMP P. C. B. ASS'Y			
D84	141-4-250T-53600	P.C.B. Ass'y, Power Amp	1
	4-237T-09900	Terminal Board, SP	1
	4-240T-21600	Socket, DC	1
	4-240T-11200	Socket, 3p	2
	141-2-368T-13802	Heat Sink	1
L781,881	4-265T-08500	VHF Coil	2
IC781,881		IC TA7237P	2
Q921		Transistor 2SD880	1
Q451,452		Transistor 2SA608 SP	2
Q781,881, 453		Transistor 2SC2785	3
D452		Zener Diode GZA4.7	1
D922		Zener Diode GZA11	1
D921,451		Diode DS135	2
D453		Diode GMA01	1
	CAPACITORS		
C921	4-163T-08200 / 4-163T-08271	or Capacitor 4700μF 25V	1
C781,881		Electrolytic 1μF 50V	2
C786,886		Electrolytic 0.22μF 50V	2
C787,887 788,888		Electrolytic 100μF 25V	4
C785,885		Electrolytic 47μF 25V	2
C452		Electrolytic 10μF 25V	1
C792,892		Electrolytic 10μF 25V	2
C922		Electrolytic 470μF 16V	1
C923		Electrolytic 100μF 16V	1
C791,891, 453		Electrolytic 47μF 16V	3
C451		Electrolytic 470μF 10V	1
C783,883		Electrolytic 4.7μF 25V	2
C789,889, 790,890,	4-223T-13800	Capacitor 0.22μF ±5% 50V	4
C793,893		Mylar 0.22μF ±10% 50V	2
C784,884, 454		Mylar 0.047μF ±20% 50V	3
C782,882		Ceramic 470pF ±10% 50V	2
	RESISTORS All resistors are Carbon T-type 1/6W, ±5% unless otherwise noted.		
R922		560 ohm P-type, FP ¼W	1
R791,891		100 ohm P-type, FP ¼W	2
R921		2.7 ohm P-type, FP ¼W	1
R786,886, 454		100K ohm	3
R458		33K ohm	1
R451,452, 953,455		22K ohm	4
R785,885		10K ohm	2
R459		2.2K ohm	1
R456		1.2K ohm	1
R787,887, 790,890		1K ohm	4
R789,889		330 ohm	2

EXPLODED VIEW (POWER SUPLLY UNIT)



PARTS LIST

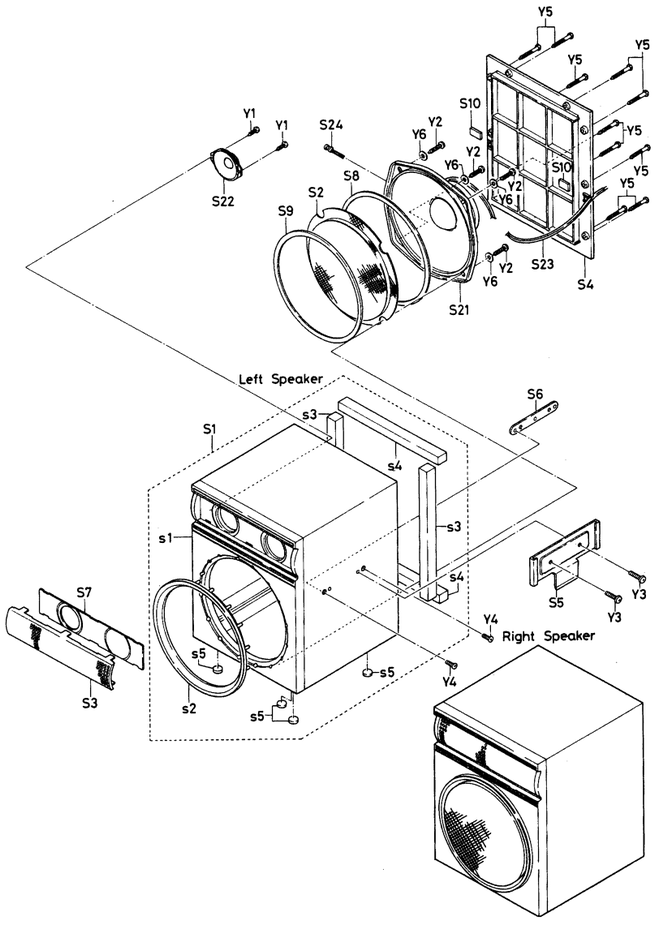
Ref. No.	Part No.	Description	Q'ty
POWER AMP P. C. B. ASS'Y			
	RESISTORS		
R788,888		470 ohm	2
R457		15K ohm	1
HEADPHONE P. C. B. ASS'Y			
D85	141-4-250T-53700	P.C.B. Ass'y, Headphone (Silver)	1
	141-4-250T-53701	P.C.B. Ass'y, Headphone (Gray)	1
	4-240T-09175	Socket, (Silver)	1
	4-240T-99275	Socket, (Gray)	1
*** POWER UNIT**			
CABINET & CHASSIS			
P 1	141-2-122T-40940	Front Panel (Silver)	1
	141-2-122T-40960	Front Panel (Gray)	1
P 2	141-2-111T-50000	Cabinet (Silver)	1
	141-2-111T-50040	Cabinet (Gray)	1
P 3	141-0-133T-15840	Compartment Lid Ass'y (Silver)	1
	141-0-133T-15860	Compartment Lid Ass'y (Gray)	1
a	141-2-153T-73400	Escutheon (Silver)	1
	141-2-153T-73440	Escutheon (Gray)	1
b	141-2-164T-29300	Slide Knob (Silver)	1
	141-2-164T-29340	Slide Knob (Grav)	1
P 4	141-0-310T-65500	Bracket Ass'y	1
P 5	141-2-754T-09700	Shaft	1
P 6	141-2-447T-71200	Cushion	2
P 7	141-2-447T-03900	Cushion	3
P11	141-0-125T-26300	Bottom Lid Ass'y	1
P12	141-0-331T-04700	Holder Battery Ass'y	1
P13	141-0-210T-35800	Bracket Ass'y	1
P14	141-2-315T-24600	Reinforcement	1
P15	141-2-119T-01240	Back Panel (Silver)	1
	141-2-119T-01260	Back Panel (Gray)	1
P16	141-2-310T-65200	Bracket, Power Switch	1
P17	141-2-310T-65300	Bracket, Trans L	1
P18	141-2-310T-65400	Bracket, Trans R	1
P19	141-2-310T-65600	Bracket, Battery Case Top	1
P20	141-2-253T-30200	Joint, Power Switch	1
P21	141-2-161T-99400	Push Button, Power Switch	1
P22	141-2-251T-07400	Hinge	1
P23	141-2-464T-39000	Fixer (Silver)	1
	141-2-464T-39030	Fixer (Gray)	1
P24	141-2-464T-29700	Fixer, DC Cord	1
P25	141-2-472T-01001	Lug	1
P26	141-2-464T-20671	Fixer, DC Cord	1
P27	141-2-453T-02101	Fiver Washer 3ϕ	1
P28	141-2-447T-69303	Cushion	2
MOUNTING PARTS			
Y 1		Pan. Hd. Tapping Screw 2.6 x 6mm	2
Y 2		Pan Hd. Tapping Screw 3 x 12mm	1
Y 3		Binding Hd. Screw 3 x 6mm	3
Y 4		Binding Hd. Screw 4 x 6mm	8
Y 5		Binding Hd. Self-Tapping Screw 4 x 6mm	4
Y 6		Binding Hd. Tapping Screw 3 x 4mm	9
Y 7		Binding Hd. Tapping Screw 3 x 6mm	4
Y 8		Binding Hd. Tapping Screw 3 x 8mm	4
Y 9		Flat Hd. Tapping Screw 2.3 x 6mm	4
Y10		Flat Hd. Tapping Screw 3 x 6mm	18
Y11		Flat Hd. Tapping Screw 3 x 8mm	2

Ref. No.	Part No.	Description	Q'ty
ELECTRICAL PARTS			
P51	4-300T-52700	Power Transformer	1
P52	4-243T-22100	Lead Cord, DC Out	1
P53	4-234T-10093	Fuse 250V, 6.3A	1
P54	4-238T-19100	Switch, Voltage Select	1
DC POWER P. C. B. ASS'Y			
P71	141-4-250T-06575	P.C.B. Ass'y, DC Power	1
	141-2-381T-04200	Bracket Fuse	2
	4-237T-00100	Terminal Board	8
	4-240T-32700	Socket, AC/DC	1
D901,902, 903,904		Diode DSA26 or GP25	4
	CAPACITORS		
C906		Mylar 0.1μF ±20% 50V	1
C901,902, 903,904		Ceramic 0.022μF +80–20% 50V	4
C907		Electrolytic 0.47μF 50V	1
POWER SWITCH P. C. B. ASS'Y			
P72	141-4-250T-06600	P.C.B. Ass'y, Power Switch	1
	4-238T-36978	Push Switch	1
	4-237T-00100	Terminal Board	2
C905		Ceramic 0.022μF +80–20% 50V	1

PARTS LIST & EXPLODED VIEW (SPEAKER UNIT)

Ref. No.	Part No.	Description	Q'ty
*** SPEAKER BOX UNIT**			
CABINET			
S 1	141-0-117T-05000	Speaker Box Ass'y, Left (Silver)	1
	141-0-117T-05030	Speaker Box Ass'y, Left (Gray)	1
S 1'	141-0-117T-05001	Speaker Box Ass'y, Right (Silver)	1
	141-0-117T-05031	Speaker Box Ass'y, Right (Gray)	1
s 1	141-2-117T-05000	Speaker Box , Left (Silver)	1
	141-2-117T-05030	Speaker Box, Left (Gray)	1
s 1'	141-2-117T-05001	Speaker Box, Right (Silver)	1
	141-2-117T-05031	Speaker Box, Right (Gray)	1
s 2	141-2-153T-83600	Escutcheon	2
s 3	141-2-315T-26100	Reinforcement	4
s 4	141-2-315T-26200	Reinforcement	4
s 5	141-2-174T-08502	Stand	8
S 2	141-2-242T-03000	Lattice (Silver), Woofer	2
	141-2-242T-03030	Lattice (Gray)	2
S 3	141-2-242T-03100	Lattice (Silver), Tweeter	2
	141-2-242T-03130	Lattice (Gray)	2
S 4	141-2-126T-39900	Back Lid, Left (Silver)	1
	141-2-126T-39930	Back Lid, Left (Gray)	1
S 4'	141-2-126T-39901	Back Lid, Right (Silver)	1
	141-2-126T-39931	Back Lid, Right (Gray)	1
C 5	141-2-310T-68102	Bracket (Silver), Fixer	2
	141-2-310T-68142	Bracket (Gray)	2

Ref. No.	Part No.	Description	Q'ty
CABINET			
S 6	141-2-310T-78000	Bracket, (S5) Mounting	2
S 7	141-2-153T-86000	Escutcheon, Tweeter	2
S 8	141-2-447T-71901	Cushion, Woofer	2
S 9	141-2-447T-72000	Cushion, Woofer	4
S10	141-2-447T-72100	Cushion, Back Lid	4
S21	4-151T-41200	Speaker, Woofer	2
S22	4-151T-37000	Speaker, Tweeter	2
S23	4-243T-21900	Lead Cord	2
S24	4-252T-05900	Choke Coil	2
MOUNTING PARTS			
Y1		Pan. Hd. Tapping Screw 2.6 x 8mm	4
Y2		Pan. Hd. Tapping Screw 4 x 12mm	8
Y3		Binding Hd. Screw 4 x 12mm	4
Y4		Flat Hd. Screw 3 x 8mm	4
Y5		Round Hd. Wood Screw 3.1 x 16mm	20
Y6		Washer 4ϕ	8



PARTS LIST

Ref. No.	Part No.	Description	Q'ty
MECHANISM (M) (TM–C9)			
M1	141-0-311T-37200	Chassis Ass'y	1
M2	141-2-742T-62700	Lever, REV	1
M3	141-2-742T-62800	Lever, CUE	1
M4	141-2-462T-67400	Boss. M2. M3. M5 Mtg.	1
M5	141-2-742T-62900	Lever, Pause	1
M6	141-2-742T-62600	Lever, Play Prevention	1
M7	141-2-851T-56100	Spring Coil, N33 Mtg.	1
M8	141-2-530T-00800	Guide, Tape	2
M9	141-2-853T-72900	Spring Plate, Head Slide Pressure	1
M10	141-0-731T-89100	Slide Ass'y, Head	1
M11	141-2-742T-66300	Lever, Rev & Cue Idler Release	1
M12	141-2-855T-74900	Spring Coil, Head Return	1
M13	141-2-855T-74800	Spring Coil, N34 Return	1
M14	141-2-853T-71000	Spring Plate, Head Slide Pressure	1
M15	141-2-462T-68700	Boss, M11 Mtg.	1
M16	141-0-531T-13300	Reel Plate Ass'y, Left	1
M17	141-0-531T-13301	Reel Plate Ass'y, Right	1
M18	141-2-731T-89300	Slide, Brake	1
M19	141-2-712T-03401	Brake Shoe	2
M20	141-2-852T-68100	Spring Wire, M18 Pressure	1
M21	4-242T-27500	E Head	1
M22	141-2-472T-05900	Lug. M21 Mtg.	2
M23	4-242T-25371	R/P Head	1
M24	123-2-472R-00200	Lug. R/P Head Earth	1
M25	141-2-851T-54500	Spring Coil, Head Azimuth	1
M26	141-2-855T-74700	Spring Coil, Pinch Roller	1
M27	141-0-545T-07200	Lever Pinch Roller Ass'y	1
M28	141-2-742T-66500	Lever, M27 Mtg.	1
M29	4-240T-20200	Socket, R/P Head, 3P	1
M30	4-238T-31200	Switch Play S8	1
M31	141-2-352T-50300	Spacer, M32 Mtg.	1
M32	141-2-737T-08200	Bracket Slide, Button Suport	1
M33	141-2-365T-55000	Bracket Switch, M34 Mtg.	1
M34	4-238T-35200	Switch, Stop/Muting S11	1
M35	141-2-855T-76300	Spring Coil, N66 Return	1
M36	141-2-742T-60300	Lever, M32 Mtg.	2
M37	141-2-462T-67200	Boss. M32 Mtg.	2
M38	141-2-742T-70900	Lever, Trigger Actuating	1
M39	141-2-462T-69800	Boss, M38 Mtg.	1
M40	4-238T-37800	Switch, Trigger S6	1
M41	141-2-855T-76100	Spring Coil, Slide Return	6
M42	141-2-855T-80500	Spring Coil, M43 Return	6
M43	141-2-731T-92500	Slide, M44. M45. M46 Mtg.	6
M44	141-2-731T-92300	Slide, REC	1
M45	141-2-731T-90901	Slide, REW/STOP/PAUSE	3
M46	141-2-731T-90900	Slide, F.FWD/PLAY	2
M47	141-2-731T-87700	Slide, Lock Release	1
M48	141-2-855T-74500	Spring Coil, M47 Return	1
M49	141-2-731T-87800	Slide, Timer Stand-by	1
M50	141-2-855T-53200	Spring, Coil, M49 Mtg.	1
M51	141-2-853T-71100	Spring Plate, Cassette Pressure	1
M52	141-0-731T-89200	Slide Ass'y, Safety Recording	1
M53	141-2-462T-67800	Boss, M52 Mtg.	2
M54	141-2-855T-05000	Spring Coil, M52 Pressure	1
M55	141-2-853T-71101	Spring Plate	1
M56			
M57			
M58	4-240T-20300	Socket, E Head 2P	1
M59	4-240T-21900	Socket, Switch Lead 10P	1
M60	141-2-490T-00600	Tube, 2x20mm, M22 Mtg.	2
M61	141-2-345T-00400	Steel Ball, 2mm	6
MECHANISM (N)			
N 1	4-527T-17371	Motor, DC9V	1
N2	141-0-661T-76208	Pulley Motor Ass'y	1
N3	141-2-445T-11801	Rubber Cushion, Motor Mtg.	3
N4	141-2-421T-27500	Special Screw, Motor Mtg.	3
N5	141-0-378T-11700	Bracket Motor Ass'y	1
N6	4-237T-10600	Terminal Board, N5 Mtg.	1
N7	141-2-472T-01201	Lug. Lead Fixer	2
N8	141-0-742T-70800	Lever Ass'y, Play Eject Stop	1
N9	141-2-561T-05272	Flat Belt, Flywheel	1
N10	141-0-521T-12123	Flywheel Ass'y	1
N11	141-2-564T-23972	Square Belt, Idler Drive	1
N12	141-0-573T-13600 / 141-0-573T-13601	Bearing Ass'y, Flywheel	1
N13	141-2-581T-19600	Gear, Cam	1
N14	141-2-581T-19500	Gear, Auto Stop Relay	1

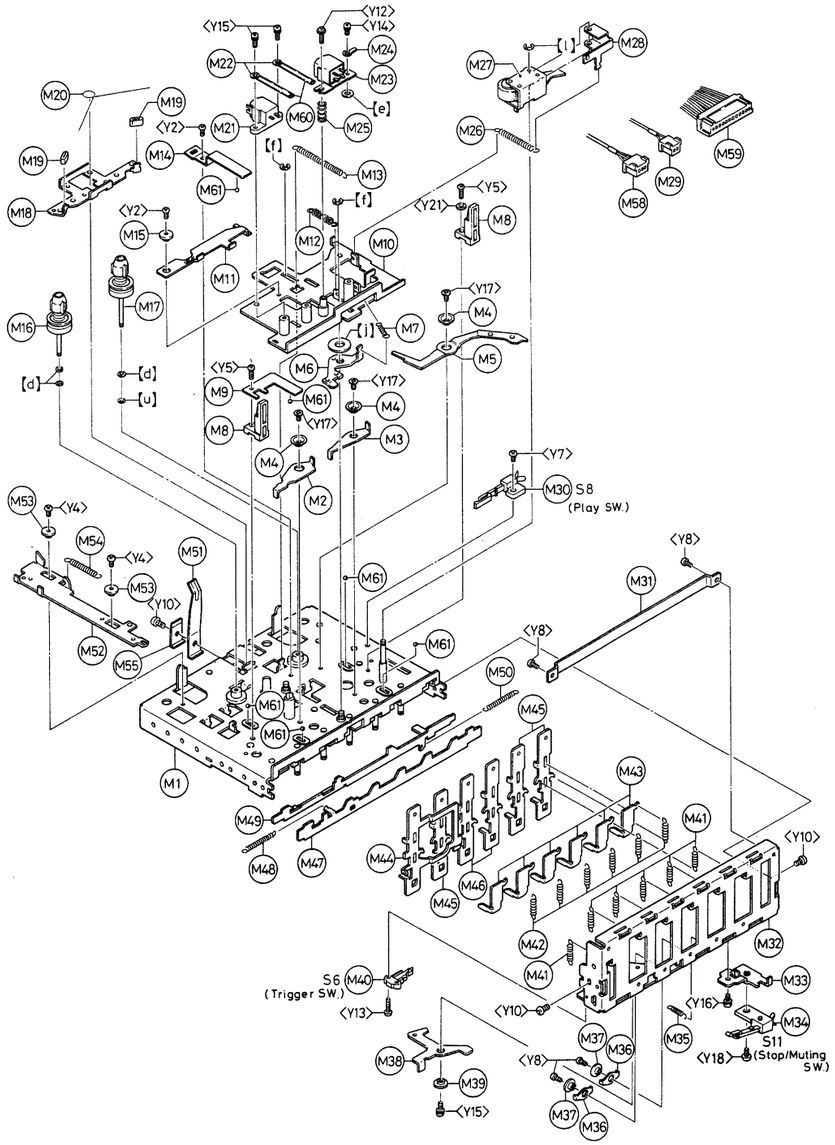
Ref. No.	Part No.	Description	Q'ty
MECHANISM (N) TM–C9			
N15	141-2-581T-19100	Gear, Auto Stop Select	1
N16	141-0-551T-03620	Idler Ass'y, PLAY	1
N17	141-2-855T-75600	Spring Coil, N16 Return	1
N18	141-2-411T-02600	Plate Nut, N12 Mtg.	1
N19	141-2-855T-75000	Spring Coil N32 Return	1
N20	141-2-365T-54200	Bracket Switch, M1 Mtg.	1
N21	4-231T-71200	Switch, PAUSE S10	1
N22	141-2-365T-54100	Bracket Switch, M1 Mtg.	1
N23	4-238T-31100	Switch, REW/FF S9	1
N24	141-2-853T-70900	Spring Plate, Safety Operation	1
N25	141-2-731T-87100	Slide, Main Brake	1
N26	141-2-855T-75400	Spring Coil, N25 Return	1
N27	141-2-731T-86400	Slide, Auto Stop	1
N28	141-2-856T-01100	Spring Coil, N27 Return	1
N29	141-2-731T-86500	Slide, Auto Stop Detect	1
N30	141-2-614T-06000	Lever Lock, Pause	1
N31	141-2-852T-68000	Spring Wire, N30 Mtg.	1
N32	141-0-731T-87200	Slide Ass'y, Pause	1
N33	141-2-731T-87000	Slide, F. FWD	1
N34	141-2-731T-86900	Slide, PLAY	1
N35	141-2-731T-86800	Slide, REW	1
N36	141-2-731T-86701	Slide, REC	1
N37	141-2-855T-75300	Spring Coil, N35. N36 Return	2
M38	141-0-352T-50602	Spacer Ass'y, N32 Mtg.	1
N39	141-0-352T-50604	Spacer Ass'y, N45 Mtg.	1
N40			
N41	141-0-352T-50603	Spacer Ass'y, N33 ~ N36 Mtg.	4
N42	141-2-855T-71801	Spring Coil, N44 ~ 46 Mtg.	6
N43			
N44	141-2-742T-59901	Lever, N32 Mtg.	1
N45	141-2-742T-60000	Lever, Lock Slide Return	1
N46	141-2-742T-59900	Lever, N33. N34. N35. N36 Mtg.	4
N47	141-2-855T-80100	Spring Coil, N44 Return	1
N48	141-2-852T-70200	Spring Wire, Insert M1 Boss	1
N49	141-2-855T-80200	Spring Coil, N45 Return	1
N50	141-2-581T-19000	Gear, Reft Reel Pulley	1
N51	141-2-855T-68100	Spring Coil, Left Reel BT	1
N52	141-2-352T-49900	Spacer, N52 Pressure	1
N53	141-0-661T-32001	Pulley Ass'y, Righ Reel	1
N54	141-2-671T-06400	Cam, N53 Mtg.	1
N55	141-2-855T-76400	Spring Coil, N53 Mtg.	1
N56	141-2-352T-48300	Spacer, N53 Mtg.	1
N57	141-2-855T-76400	Spring Coil, N58 Perssure	1
N58	141-0-742T-60472	Lever Ass'y, Idler Drive	1
N59	141-0-731T-87502	Slide Ass'y, Lock	1
N60	141-0-731T-86600	Slide Ass'y, AMSS Lock	1
N61	141-2-855T-75500	Spring Coil, N59 Return	1
N62	141-2-855T-76800	Spring Coil, N60 Return	1
N63	4-264T-10200	Magnetic Coil, AMSS	1
N64	141-2-855T-75800	Spring Coil, N65 Return	1
N65	141-2-731T-87400	Slide, N59 Mtg.	1
N66	141-2-731T-87600	Slide, Auto Stop-Flywheel Relay	1
N67	141-0-742T-60100	Lever Ass'y, N13 Lock	1
N68	141-2-855T-75100	Spring Coil, N33 Return	1
N69	4-238T-09600	Switch, Main (Power), S7	1
N70	141-2-855T-05000	Spring Coil, N8 Return	1
N71	141-2-464T-20671	Fixer, Lead Retainer	1
N72	141-2-447T-93900	Cushion, M1 Mtg.	2
MOUNTING WASHERS			
a	141-2-457T-04100	Special Washer GNW 1.7 x 4.7 x 0.5mm	3
b	141-2-457T-04300	Special Washer, N Flywheel	1
c	141-2-457T-06200	Special Washer, GNW 2.1 x 9 x 0.3mm	1
d	141-2-457T-10200	Special Washer GNW 2 x 3 x 0.5mm	3
e	141-2-457T-10300	Special Washer GNW 3.2 x 5.75 x 0.1mm	1
f	141-2-457T-23000	Special Washer, E Ring 2ϕmm	11
g	141-2-457T-23100	Special Washer, E Ring 3ϕmm	1
h	141-2-457T-23700	Special Washer, E Ring 1.2ϕmm	2
i	141-2-457T-23800	Special Washer, E Ring 1.5ϕmm	1
j	141-2-457T-33400	Special Washer GNW 5.1 x 11.5 x 0.3mm	1
k	141-2-457T-36300	Special Washer, GNW 2.6 x 10 x 3mm	1
l	141-2-457T-41600	Special Washer GNW 2 x 5 x 0.5mm	1

PARTS LIST

Key No.	Part No.	Description	Q'ty
MOUNTING WASHERS			
u	141-2-453T-30101	Washer, GF Nylon 4.1 x 6.5 x 0.25mm	1
v	141-2-453T-30102	Washer, GF Nylon 4.1 x 6.5 x 0.13mm	2
w	141-2-453T-30202	Washer, GF Nylon 3.1 x 5.4 x 0.25mm	1
x	141-2-453T-30301	Washer, GF Nylon 2.6 x 4.7 x 0.5mm	1
y	141-2-453T-30500	Washer GF Nylon 2.1 x 4.0 x 0.5mm	1
z	141-2-453T-30501	Washer, GF Nylon 2.1 x 4 x 0.25mm	3

Key No.	Part No.	Description	Q'ty
MECHANISM MOUNTING SCREW			
Y1		Pan Head Screw 2x6 m/m	1
Y2		Pan Head Screw 2.6x3 m/m	2
Y3		Pan Head Screw 2.6x3.5 m/m	3
Y4		Pan Head Screw 2.6x4 m/m	3
Y5		Pan Head Screw 2.6x6 m/m	2
Y6		Pan Head Screw 2.6x8 m/m	1
Y7		Pan Head Screw 3x4 m/m	1
Y8		Pan Head Screw Forming Screw 2.6x4 m/m	4

EXPLODED VIEW (MECHANISM 1/2)

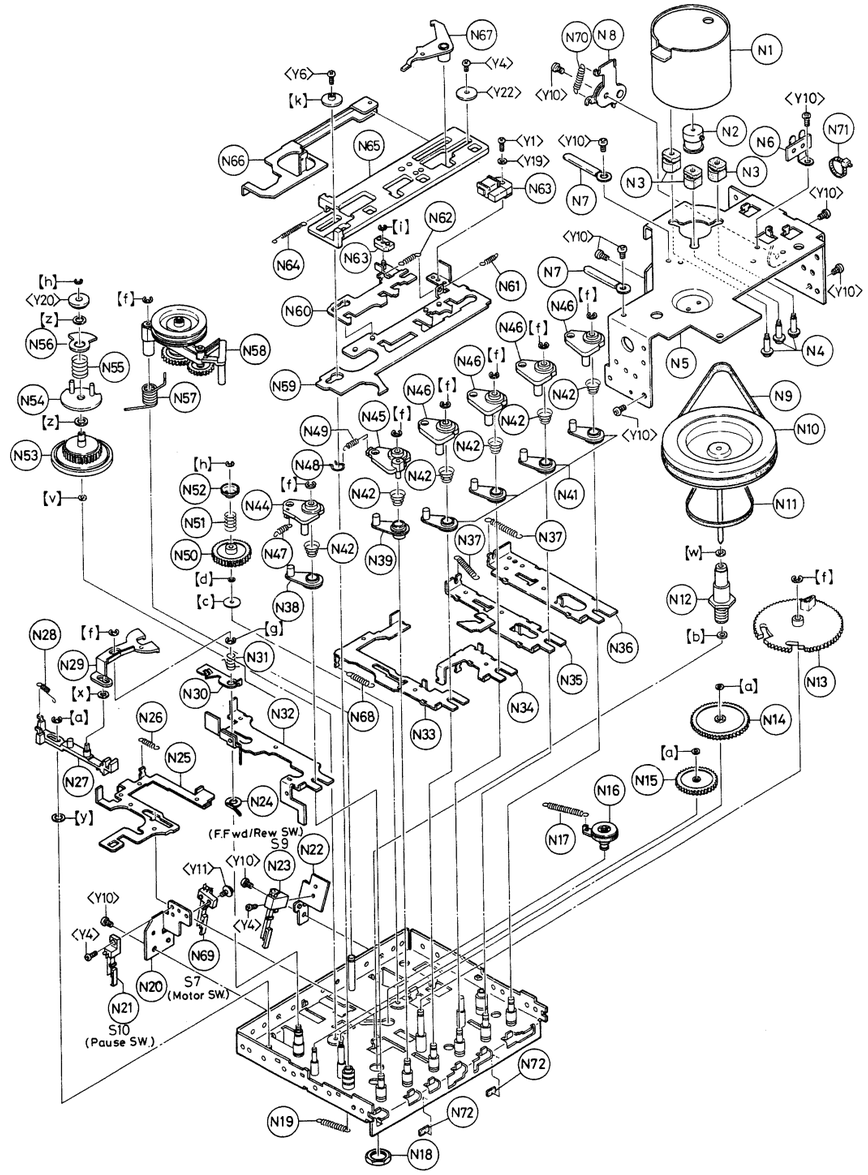


PARTS LIST

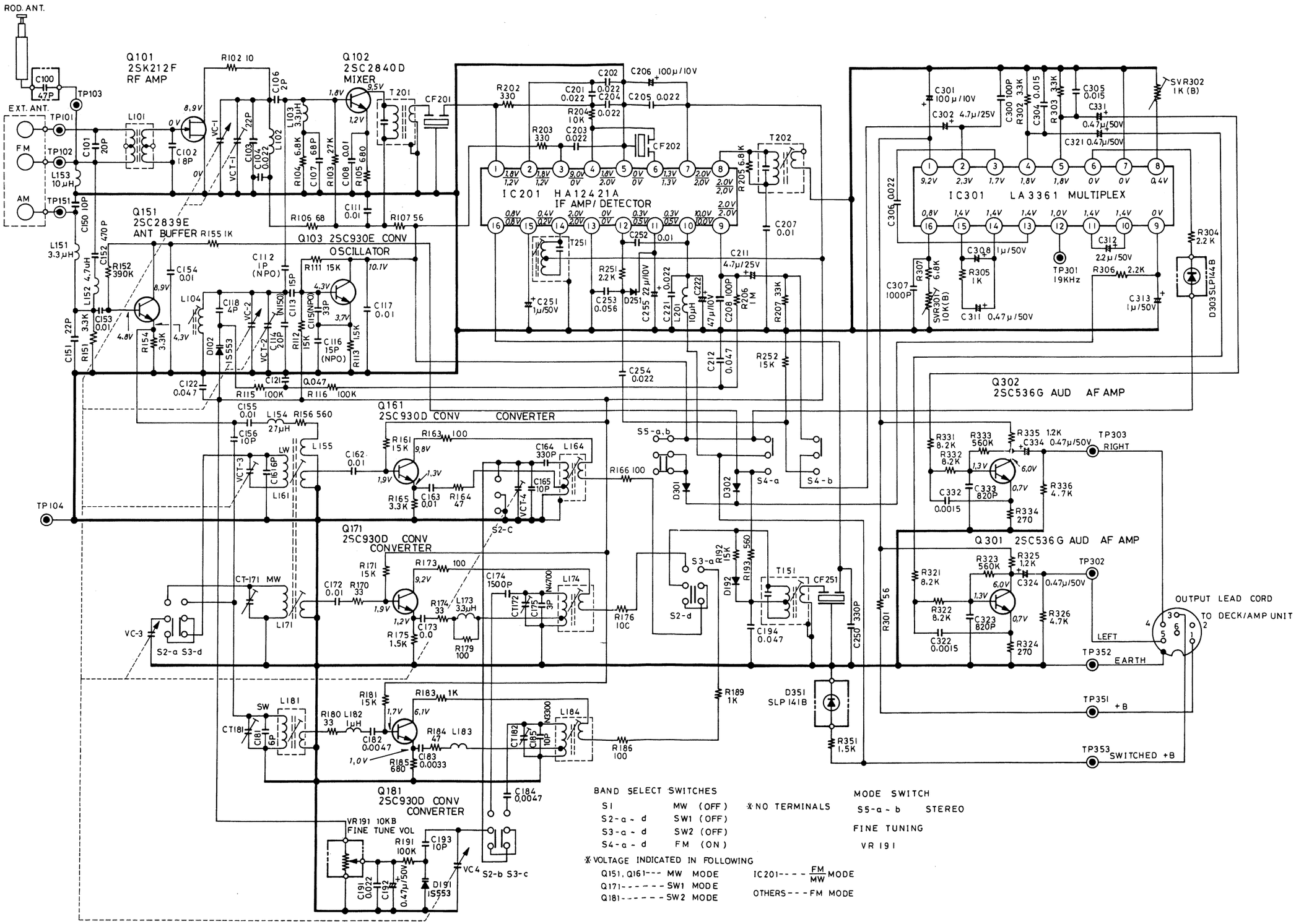
Key No.	Part No.	Description	Q'ty
MECHANISM MOUNTING SCREW			
Y9		Pan Head Screw Forming Screw 2.6x6 m/m	2
Y10		Pan Head Screw Forming Screw 3x4 m/m	15
Y11		Pan Head with Washer 2x4 m/m	1
Y12		Pan Head with Washer 2x6 m/m	1
Y13		Pan Head with Washer 2x8 m/m	1
Y14		Pan Head with Spring Washer 2x4 m/m	1

Key No.	Part No.	Description	Q'ty
MECHANISM MOUNTING SCREW			
Y15		Pan Head with Spring Washer 2x6 m/m	3
Y16		Pan Head with Spring Washer 2.6x4 m/m	1
Y17		Flat Head Screw 2.6x3.5 m/m	2
Y18		Binding Head Screw 3x4 m/m	1
Y19		Washer 2x4.3x0.4 m/m	1
Y20		Washer 2 x 6 x 0.5m/m	1
Y21		Washer 2.6 x 5 x 0.5m/m	1
Y22		Washer 2.6x10x0.5 m/m	1

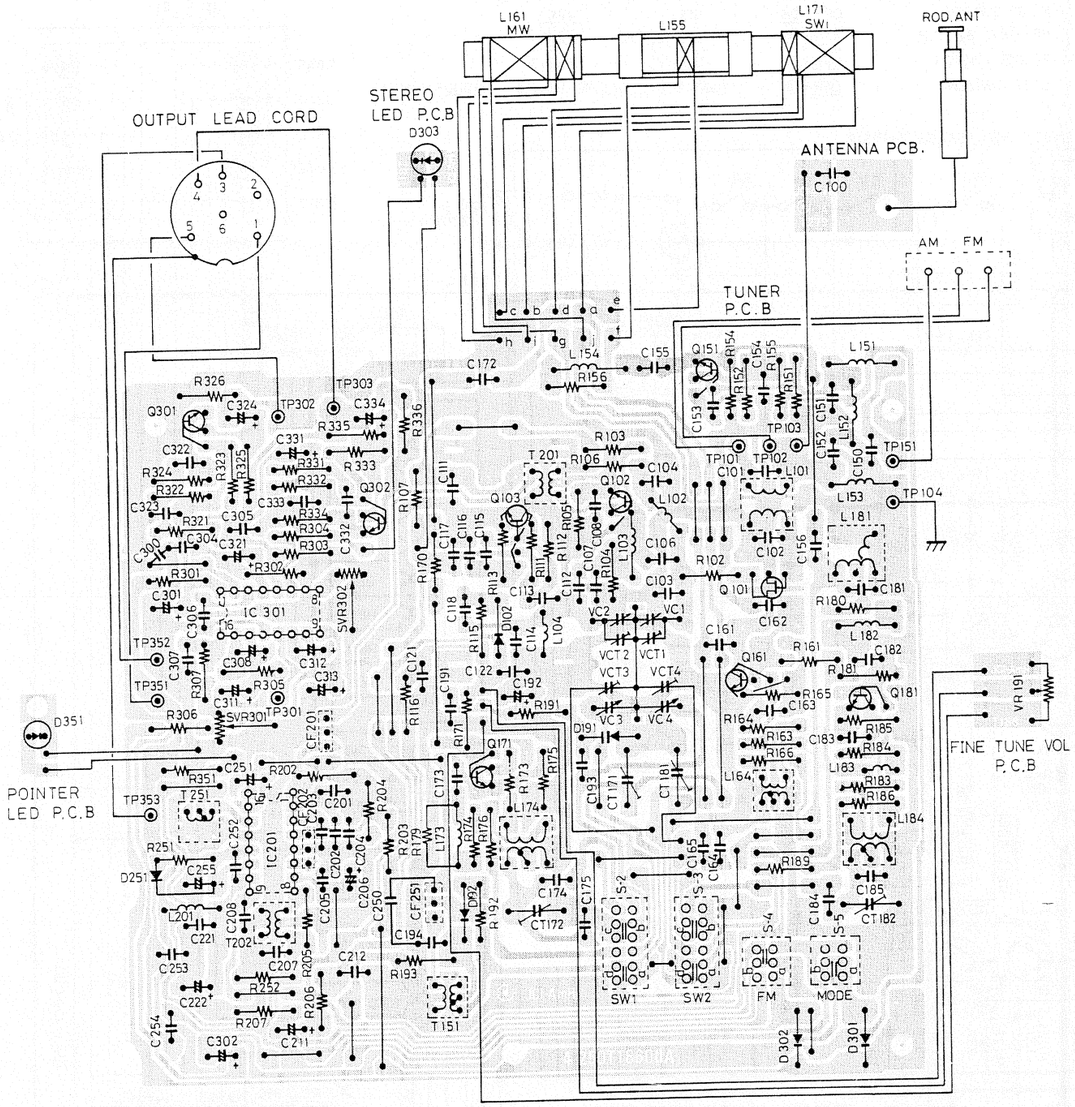
EXPLODED VIEW (MECHANISM 2/2)



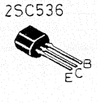
SCHEMATIC DIAGRAM (TUNER)



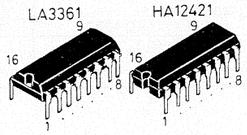
WIRING DIAGRAM (TUNER)



TRANSISTOR CONNECTION
2SK212
2SC930
2SC536



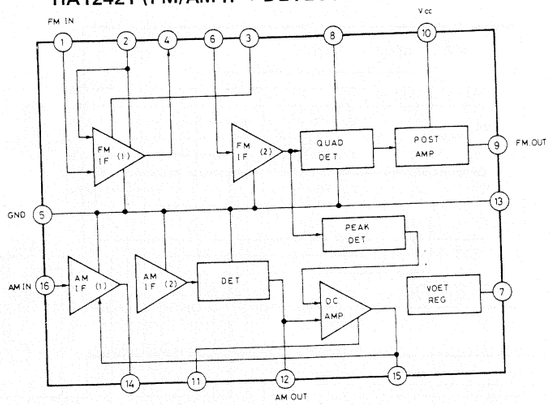
IC CONNECTION
LA3361
HA12421



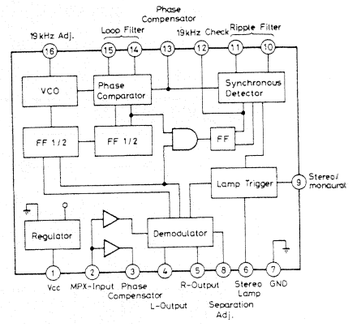
TRANSISTOR CONNECTION
2SC2840
2SC2839

IC BLOCK DIAGRAM

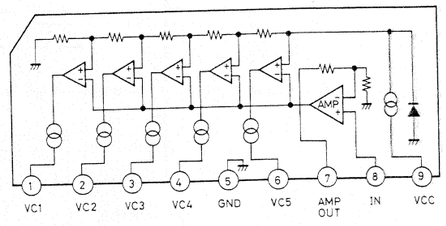
HA12421 (FM/AM IF + DETECTOR SYSTEM)



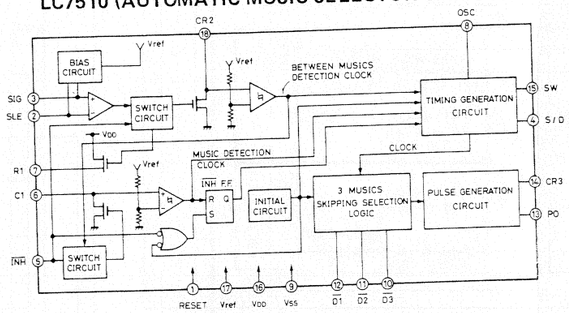
LA3361 (PLL FM MULTIPLES STEREO DEMODULATOR)



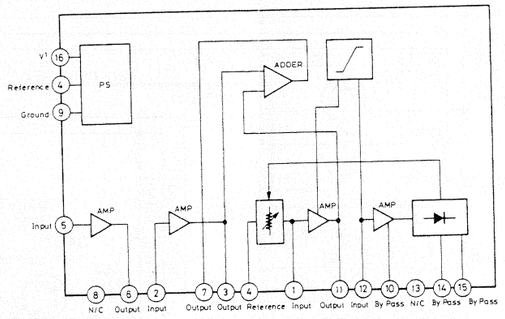
LB1403 (VU METER)



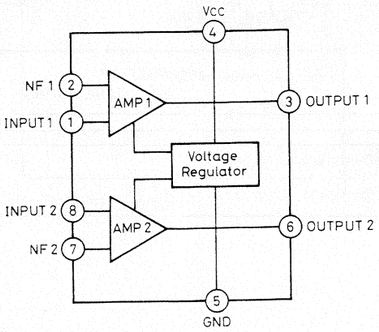
LC7510 (AUTOMATIC MUSIC SELECTOR C MOS IC)



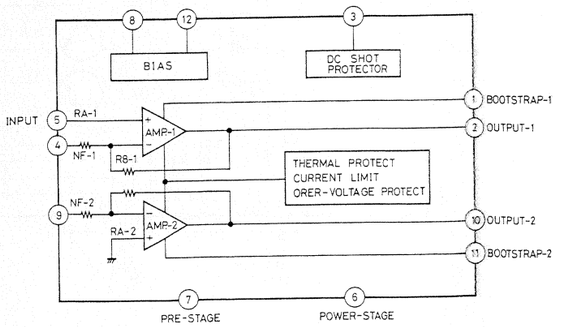
NE646NY (DOLBY B-TYPE NOISE REDUCTION CIRCUIT)



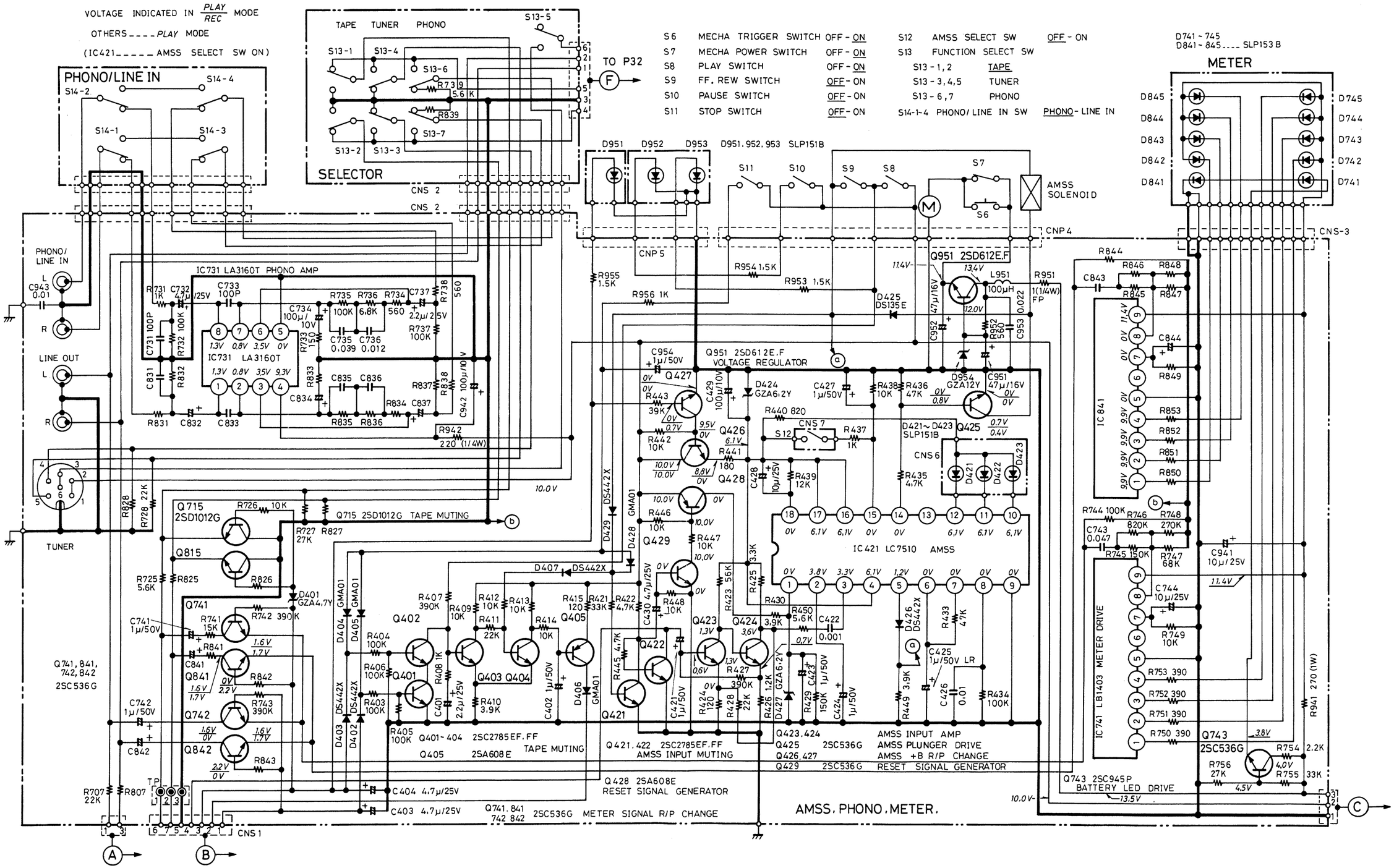
LA3160T (DUAL PRE-AMPLIFIER)

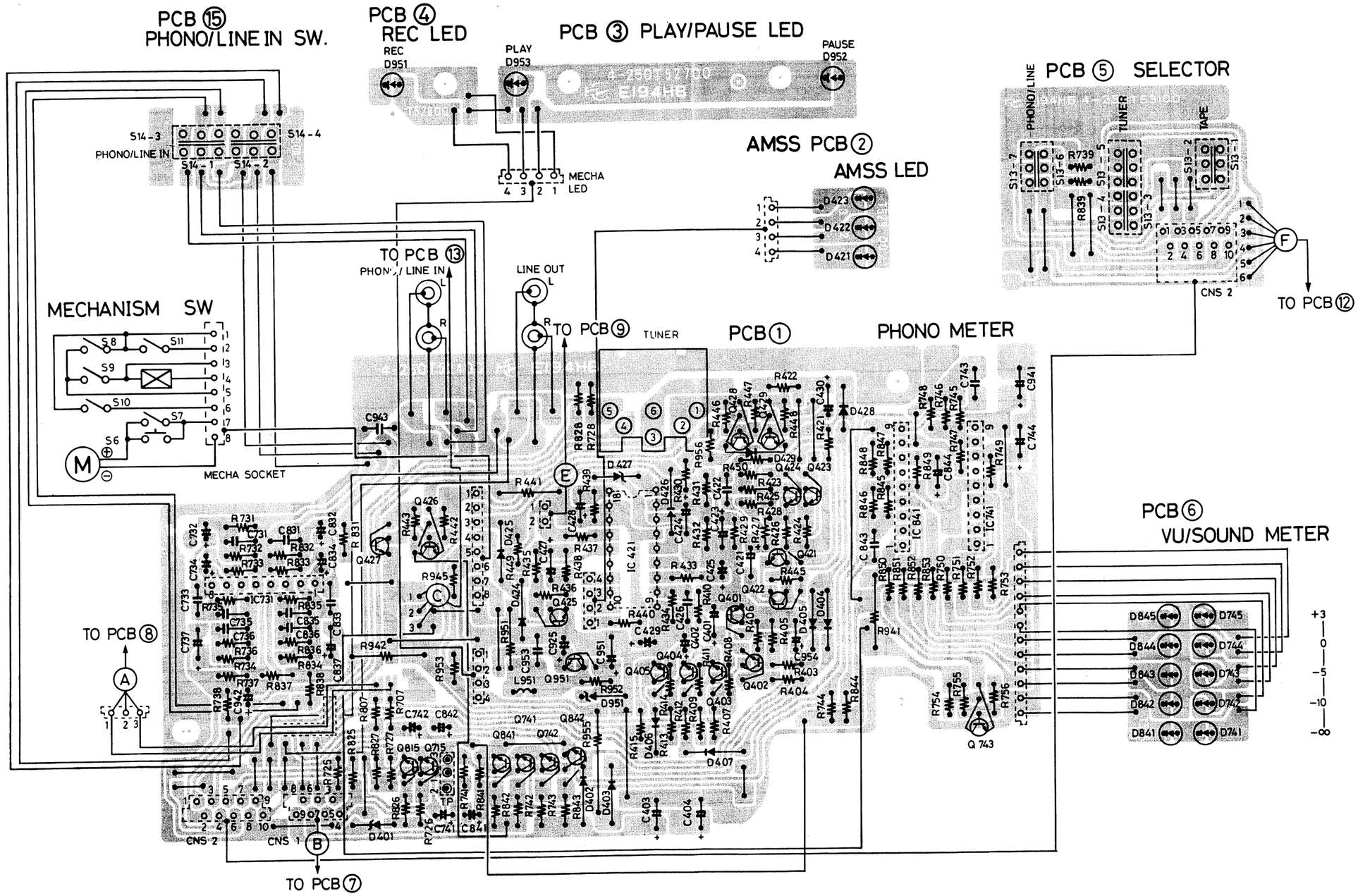


TA7237 (POWER AMPLIFIER)

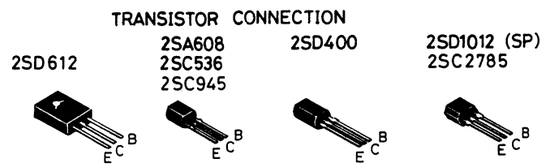


SCHEMATIC DIAGRAM (DECK/AMP 1)

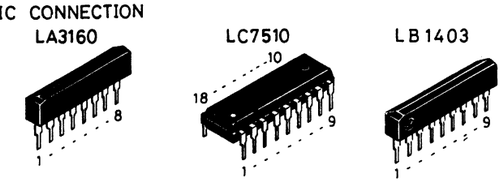




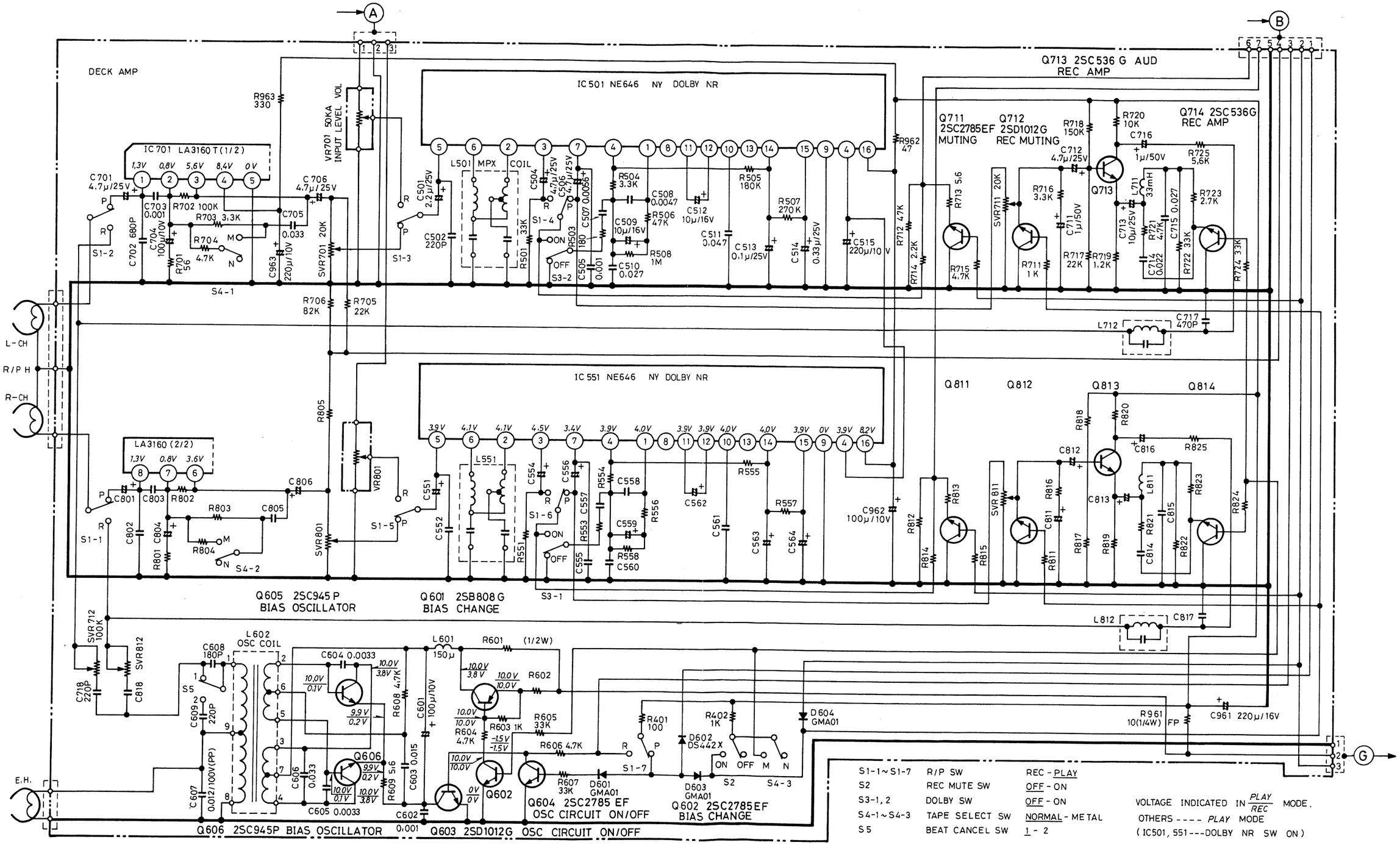
TRANSISTOR CONNECTION

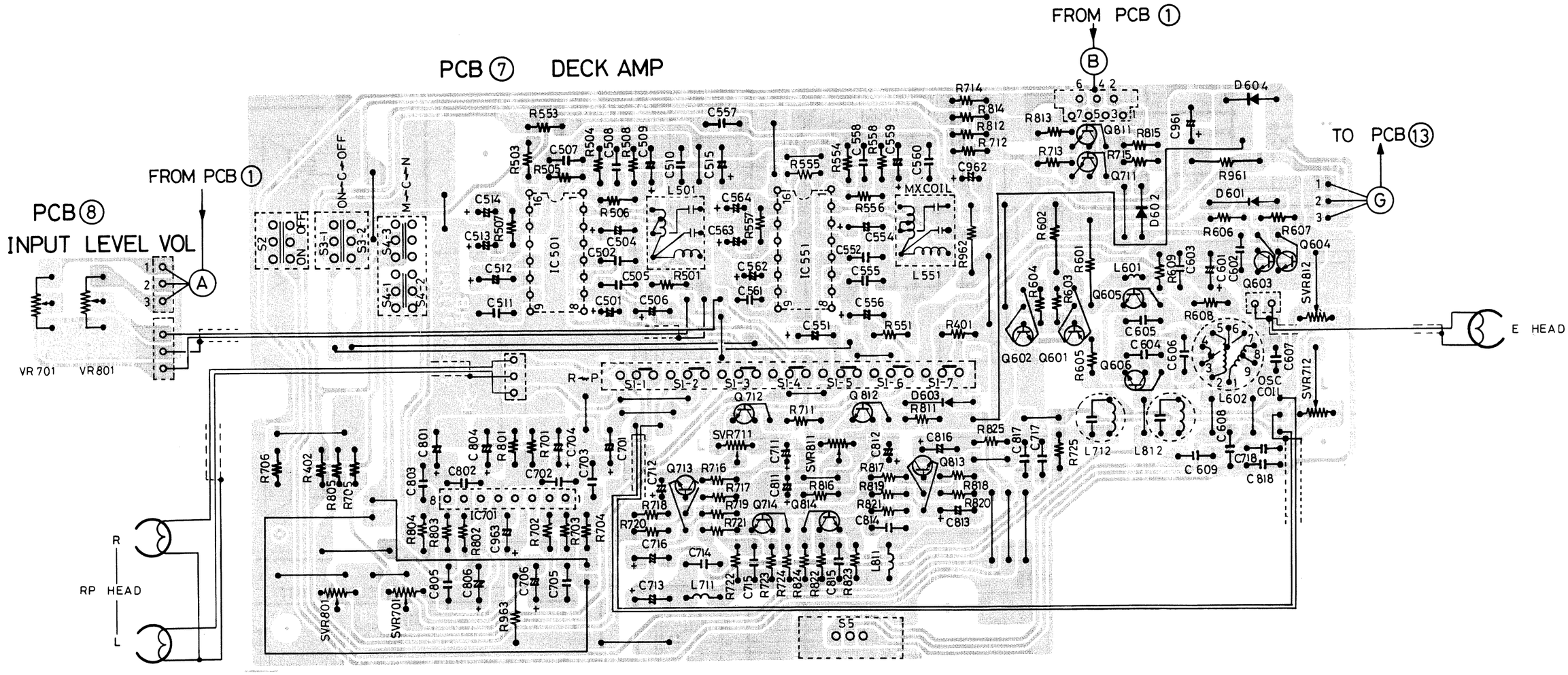


IC CONNECTION



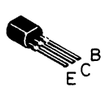
SCHEMATIC DIAGRAM (DECK/AMP 2)



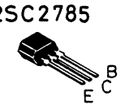


TRANSISTOR CONNECTION

2SC536
2SC945

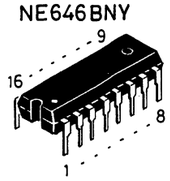


2SB808 (SP)
2SD1012 (SP)
2SC2785

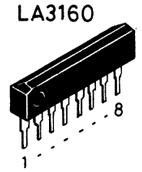


IC CONNECTION

NE646BNY

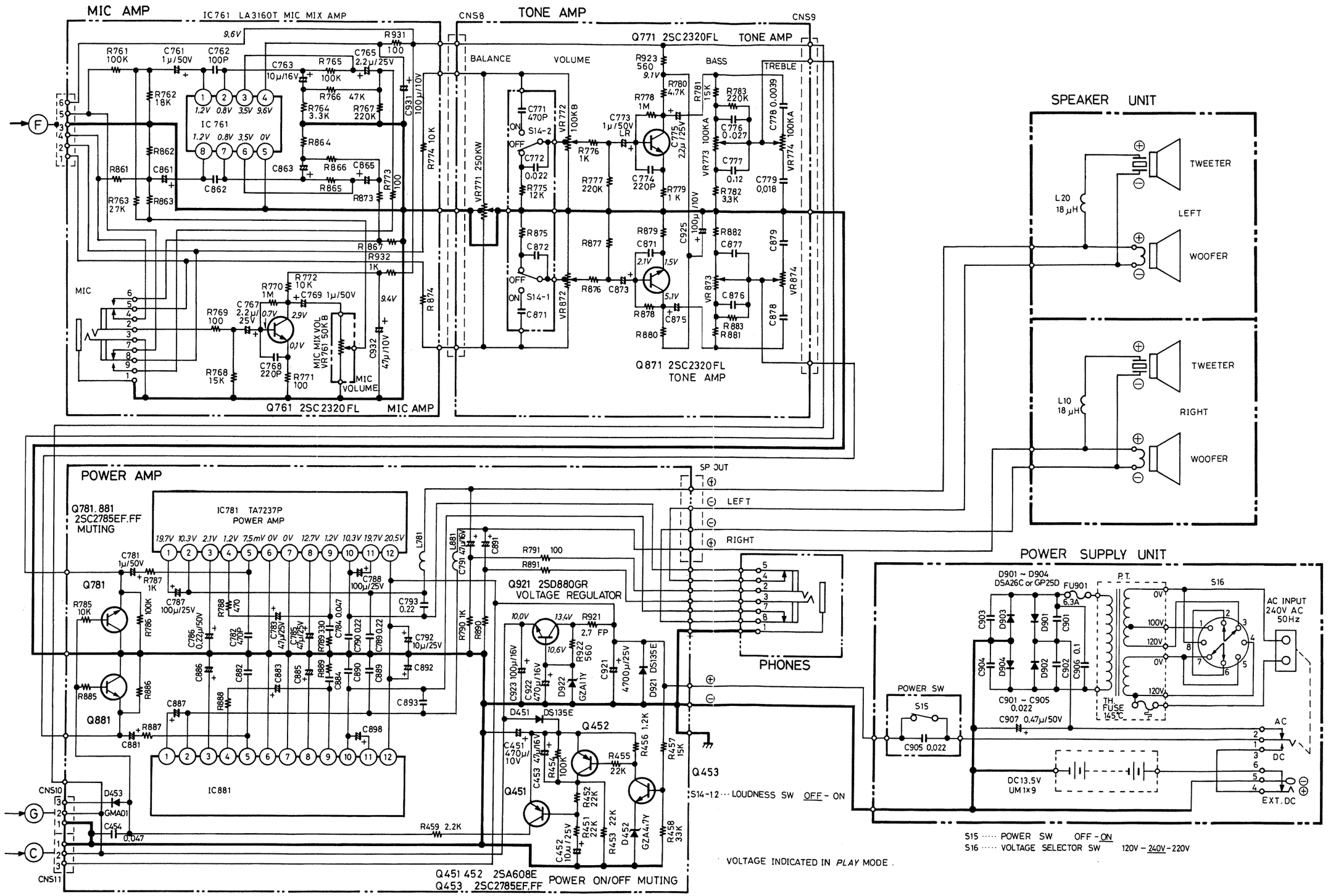


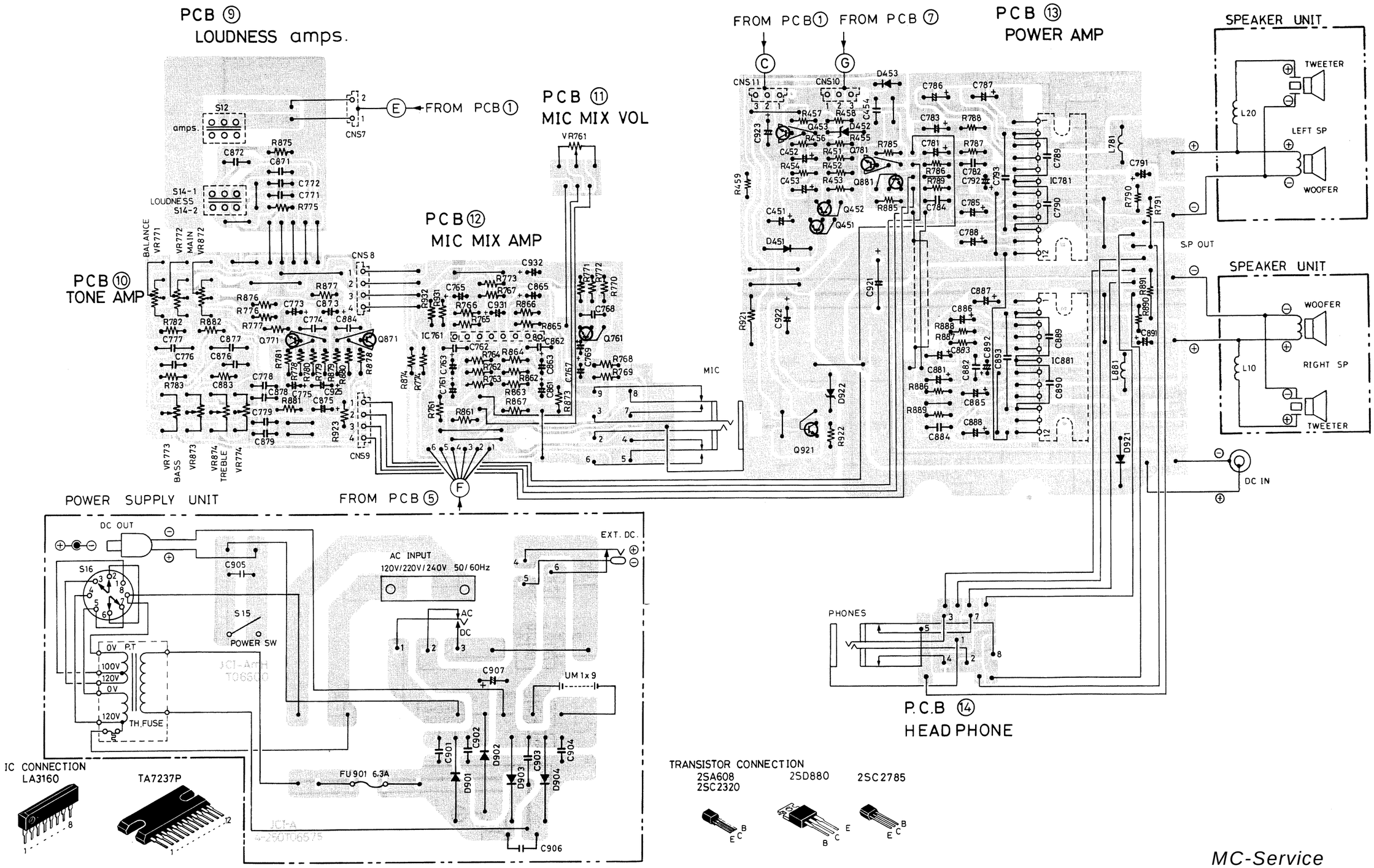
LA3160



MC-Service

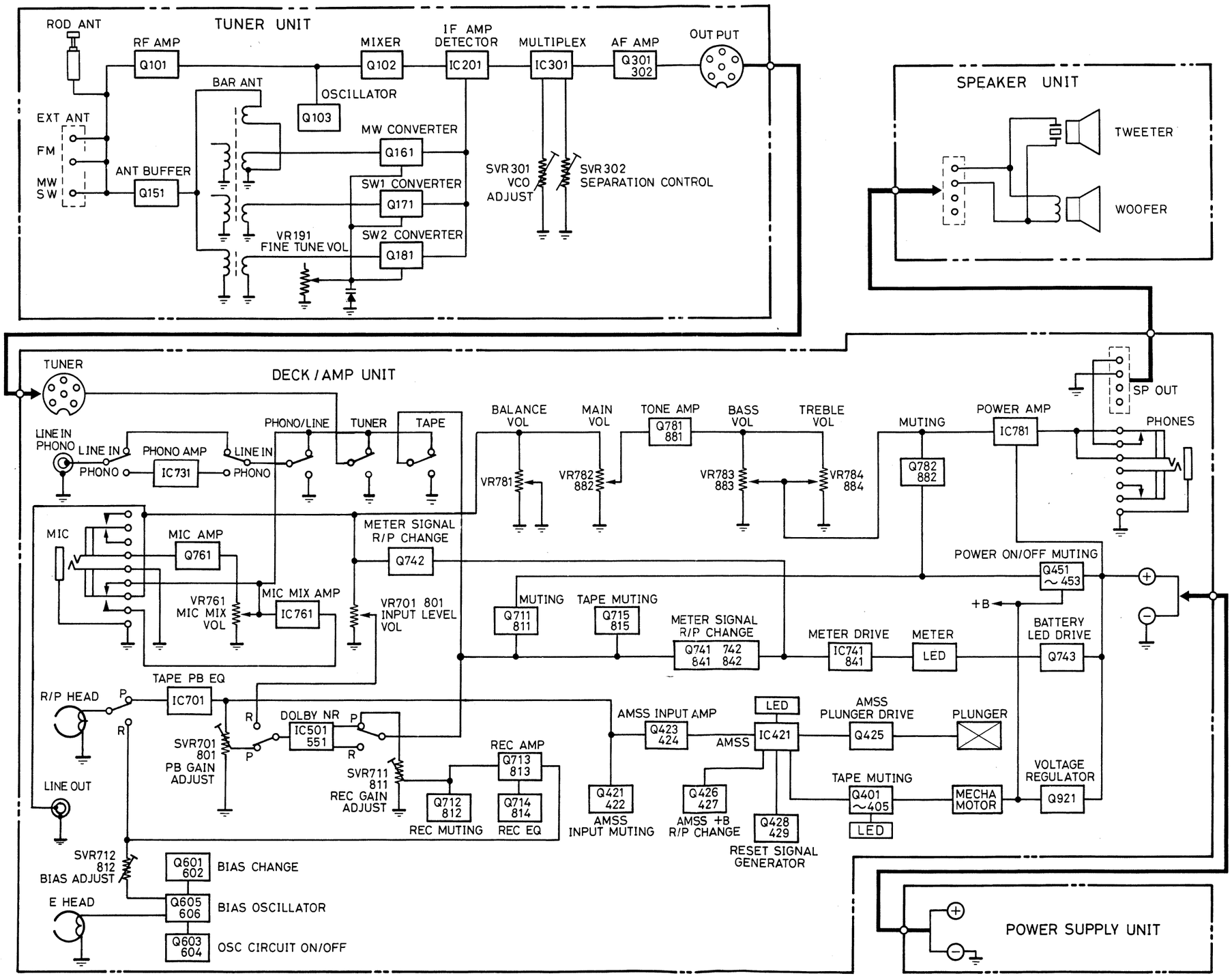
SCHEMATIC DIAGRAM (DECK/AMP 3, POWER SUPLLY, SPEAKER)




PCB ⑨
LOUDNESS amps.
PCB ⑩
TONE AMP
PCB ⑪
MIC MIX VOL
PCB ⑫
MIC MIX AMP
FROM PCB ①
FROM PCB ⑦
PCB ⑬
POWER AMP
SPEAKER UNIT
TWEETER
LEFT SP
WOOFER
S.P OUT
RIGHT SP
DC IN
MIC
FROM PCB ⑤
POWER SUPPLY UNIT
DC OUT
AC INPUT
120V/220V/240V 50/60Hz
EXT. DC.
POWER SW
TH.FUSE
FU901 6.3A
PHONES
P.C.B ⑭
HEAD PHONE
IC CONNECTION
LA3160
TA7237P
TRANSISTOR CONNECTION
2SA608
2SC2320
2SD880
2SC2785

MC-Service

BLOCK DIAGRAM



SANYO ELECTRIC TRADING CO., LTD.
33, Hiyoshi-cho 2-chome, Moriguchi-shi,
Osaka-fu, 570 Japan.

May./'82/1000 KM Printed in Japan.

MODIFICATION NOTICE

MINI COMPONENT SYSTEM

SANYO

C 9 (GENERAL) WM-7988

Date Oct. 10, 1984 Issued by

The following corrections should be made in the SERVICE MANUALS aod PARTS (PRICE) LIST.

		Section	Key No.	Part No.	Description	Q'ty	Remark	Reason
1	From	Headphone		4-240T-99275	Socket (Gray)			E
	To	PCB Assy		4-240T-99271	"			
2	From							
	To							
3	From							
	To							

INTERCHANGEABLE NOT INTERCHANGEABLE	Serial No. Chassis No.	Effective from
Q'ty of initial production before modification.	Identification of modified unit.	

REASON FOR MODIFICATION
A .....Standardization C .....Improvement of reliadility E .....Misprint G .....
B .....Change of materials D .....Improvement of performance F .....Registration

SANYO ELECTRIC TRADING CO., LTD.
OSAKA, JAPAN

Printed in Japan 1000

WM- 12918

MC-Service